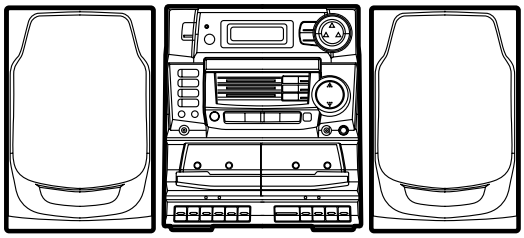
aiwa SERVICE

CA-DW935M U



SERVICE MANUAL

COMPACT DISC CARRY
COMPONENT SYSTEM

BASIC TAPE MECHANISM : TN-21ZFW-1791
BASIC CD MECHANISM : ZZG-4 YG

This Service Manual is the "Revision Publishing" and replaces "Simple Manual"
(S/M Code No. 09-997-413-5T1).

aiwa

S/M Code No. 09-997-413-5R1

REVISION DATA

SPECIFICATIONS

<Tuner section>

(FM)

Tuning range	87.5 MHz to 108.0 MHz
Antenna	Rod antenna

(AM)

Tuning range	530 kHz to 1710 kHz (10 kHz step) 531 kHz to 1602 kHz (9 kHz step)
Antenna	Ferrite bar antenna

<Cassette deck section>

Track format	4 track, 2 channels stereo
Frequency response	Normal tape: 50 Hz - 12500 Hz
Recording system	AC bias
Heads	Deck 1: Recording/Playback head x 1 Erasure head x 1 Deck 2: Playback head x 1

<Compact disc player section>

Laser	Semiconductor (λ = 780 nm)
D-A converter	1 bit dual

<General>

Power output	5 W + 5 W (4 ohms, EIAJ) FTC rule 4 watts per channel, Min. RMS at 4 ohms from 65 Hz to 5000 Hz, with no more than 1% total harmonic distortion
Input	VIDEO/AUX: 1000 mV
Output	Headphones (stereo minijack)
Power requirements	12 V DC using eight size D (R20) batteries 120 V AC, 60 Hz
Power consumption	30 W
Dimensions of main unit	(W x H x D) 266 x 303 x 307 mm (10 $^1/_2$ x 12 x 12 $^1/_8$ in.)
Weight of main unit	4.85 kg (10 lb 11 oz.)

<Speaker>

Type	120 mm cone type 27 mm ceramic type
Dimensions (W x H x D)	197 x 303 x 231 mm (7 $^1/_8$ x 12 x 9 $^1/_8$ in.)
Weight	1.7 kg (3 lbs 12 oz) x 2
Impedance	4 ohms
Allowable max, input	10 W

• Design and specifications are subject to change without notice.

ACCESSORIES LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

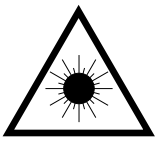
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-CT1-905-010		IB,U(ESF)S
2	8Z-CK4-962-010		RC UNIT,RC-ZAT04 (VS)
⚠ 3	87-A80-109-010		AC CORD,HK7281 BLK U

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynling laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

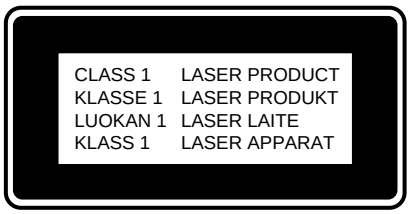
ATTENTION

L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!

Usynlig laserstråling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

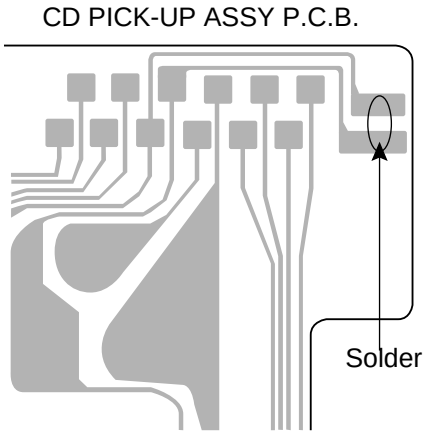


Precaution to replace Optical block

(KSS – 213F)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in the right figure.



ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-A21-184-010		IC,TA2104AN
	87-A21-185-040		C-IC,LC72121M
	8Z-CT1-610-010		C-IC,LC867232A-5L78
	87-A20-914-010		IC,SPS-442-1-F
	87-A21-116-040		C-IC,BH3862FS
	87-017-889-010		IC,NJM4558LD
	87-070-417-010		IC,NJM4558 DD
	87-A21-103-040		C-IC,MM1454XFBE
	87-A21-020-010		IC,TA8223K
	87-070-416-010		IC,NJU7201 L55
	87-A20-446-010		C-IC,LA9241ML
	87-A20-459-010		C-IC,LC78622ED
	87-A20-445-010		IC,BA5936
TRANSISTOR			
	87-026-291-080		TR,DTC124XS
	87-A30-091-080		FET,2SJ460
	89-213-702-010		TR,2SB1370E(1.8W)
	87-026-346-080		C-TR,DTC114YU
	89-319-233-080		TR,2SC1923 (0.1W)
	87-026-215-080		TR,DTC114YS
	87-026-462-080		TR,2SC1740 S(RS 0.3W)
	87-026-463-080		TR,2SA933SRS(0.3W)
	87-026-486-080		TR,DTA144TS
	87-026-287-080		TR,DTC143ES
	89-414-683-080		TR,2SD1468S 150MHZ 0.4
	87-A30-090-080		FET,2SK2541
	87-A30-197-080		TR,KTA1267GR
	89-320-011-080		TR,2SC2001K(15W)
	87-026-610-080		TR,KTC3198GR
	87-026-214-080		TR,DTA114YS (0.3W)
	87-026-218-080		TR,DTC144ES (0.2W)
	89-406-555-080		TR,2SD655E(0.5W)
	87-A30-219-080		TR,2SB1443(Q)
	87-026-219-080		TR,DTA144ES (0.3W)
	89-109-521-080		TR,2SA952K(0.6W)
	89-318-154-080		TR,2SC1815Y(0.4W)
	87-026-239-080		TR,DTC114TK (0.2W)
	89-113-187-080		TR,2SA1318TU
	87-026-237-080		CHIP-TR,DTC124XK
	89-327-125-080		CHIP-TR,2SC2712GR
DIODE			
	87-020-465-080		DIODE,1SS133 (110MA)
	87-017-072-080		ZENER,HZS3B1
	87-027-399-080		ZENER,HZ7A3L
	87-017-091-080		ZENER,HZS5C1
	87-A40-156-080		DIODE,1N5392
	87-017-164-080		ZENER,HZS9A2L
	87-017-139-080		ZENER,HZS15-2
	87-A40-291-080		DIODE,1N4148 (CPT)
MAIN C.B			
C1	87-010-314-080		C-CAP,S 22P-50V
C2	87-010-316-080		C-CAP,S 33P-50 CH
C3	87-010-314-080		C-CAP,S 22P-50V
C5	87-010-196-080		CHIP CAPACITOR,0.1-25
C6	87-010-313-080		CAP, CHIP 18P
C7	87-014-049-080		CAP,PP 470P-100 J
C8	87-012-349-080		C-CAP,S 1000P-50 CH
C10	87-010-197-080		CAP, CHIP 0.01 DM
C11	87-010-197-080		CAP, CHIP 0.01 DM
C12	87-010-197-080		CAP, CHIP 0.01 DM
C13	87-010-150-080		C-CAP,S 6P-50 CH
C14	87-010-303-080		C-CAP,S 330P-50CH
C15	87-012-349-080		C-CAP,S 1000P-50 CH
C16	87-010-380-080		CAP, ELECT 47-16V
C17	87-010-198-080		CAP, CHIP 0.022
C18	87-015-819-080		CAPACITOR,0.01
C19	87-010-112-080		CAP, ELECT 100-16V
C20	87-010-404-080		CAP, ELECT 4.7-50V
C21	87-010-197-080		CAP, CHIP 0.01 DM
C22	87-010-197-080		CAP, CHIP 0.01 DM
C23	87-010-197-080		CAP, CHIP 0.01 DM
C24	87-010-303-080		C-CAP,S 330P-50CH
C25	87-016-460-080		C-CAP,S 0.22-16 B
C27	87-A11-067-080		C-CAP,S 1-10 K B
C28	87-016-669-080		C-CAP,S 0.1-25 K B
C29	87-016-669-080		C-CAP,S 0.1-25 K B
C30	87-010-198-080		CAP, CHIP 0.022
C31	87-010-198-080		CAP, CHIP 0.022
C33	87-010-401-080		CAP, ELECT 1-50V
C34	87-010-401-080		CAP, ELECT 1-50V
C35	87-015-819-080		CAPACITOR,0.01
C36	87-010-112-080		CAP, ELECT 100-16V
C37	87-010-197-080		CAP, CHIP 0.01 DM
C38	87-010-380-080		CAP, ELECT 47-16V
C39	87-010-404-080		CAP, ELECT 4.7-50V
C40	87-010-197-080		CAP, CHIP 0.01 DM
C41	87-012-349-080		C-CAP,S 1000P-50 CH
C42	87-012-349-080		C-CAP,S 1000P-50 CH
C43	87-012-349-080		C-CAP,S 1000P-50 CH
C44	87-010-311-080		CAP 12P
C45	87-010-312-080		C-CAP,S 15P-50 CH
C47	87-010-197-080		CAP, CHIP 0.01 DM
C48	87-010-197-080		CAP, CHIP 0.01 DM
C49	87-010-303-080		C-CAP,S 330P-50CH
C50	87-010-197-080		CAP, CHIP 0.01 DM
C52	87-016-669-080		C-CAP,S 0.1-25 K B
C53	87-016-669-080		C-CAP,S 0.1-25 K B
C55	87-018-115-080		CAP, CER 47P-50V
C56	87-018-131-080		CAP, CER 1000P-50V
C201	87-010-405-080		CAP, ELECT 10-50V
C202	87-010-405-080		CAP, ELECT 10-50V
C207	87-010-546-080		CAP, ELECT 0.33-50V
C208	87-010-546-080		CAP, ELECT 0.33-50V
C213	87-010-401-080		CAP, ELECT 1-50V
C214	87-010-401-080		CAP, ELECT 1-50V
C215	87-010-401-080		CAP, ELECT 1-50V
C216	87-010-401-080		CAP, ELECT 1-50V
C217	87-010-221-080		CAP, ELECT 470-10V
C225	87-018-205-080		CAP, CERA-SOL 0.022
C226	87-010-263-080		CAP, ELECT 100-10V
C227	87-010-404-080		CAP, ELECT 4.7-50V
C228	87-010-404-080		CAP, ELECT 4.7-50V
C229	87-018-209-080		CAP, CER 0.1-50V
C230	87-010-401-080		CAP, ELECT 1-50V
C231	87-010-401-080		CAP, ELECT 1-50V
C232	87-010-404-080		CAP, ELECT 4.7-50V
C260	87-010-405-080		CAP, ELECT 10-50V
C301	87-018-131-080		CAP, CER 1000P-50V
C302	87-018-131-080		CAP, CER 1000P-50V
C303	87-018-130-080		CAP,TC-U 820P-50 B
C304	87-018-130-080		CAP,TC-U 820P-50 B
C305	87-010-263-080		CAP, ELECT 100-10V
C306	87-010-263-080		CAP, ELECT 100-10V
C309	87-018-130-080		CAP,TC-U 820P-50 B
C310	87-018-130-080		CAP,TC-U 820P-50 B
C311	87-010-546-080		CAP, ELECT 0.33-50V
C312	87-010-546-080		CAP, ELECT 0.33-50V
C321	87-018-131-080		CAP, CER 1000P-50V
C331	87-018-126-080		CAP,TC-U 390P-50 B
C332	87-018-126-080		CAP,TC-U 390P-50 B
C333	87-018-124-080		CAP, CER 270P-50V
C334	87-018-123-080		CAP, CER 220P-50V

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C340	87-010-374-080		CAP, ELECT 47-10V
C341	87-018-205-080		CAP, CERA-SOL 0.022
C343	87-018-123-080		CAP, CER 220P-50V
C344	87-018-123-080		CAP, CER 220P-50V
C355	87-018-132-080		CAP, CER 2200P-16V
C356	87-018-132-080		CAP, CER 2200P-16V
C369	87-018-118-080		CAP,TC-U 82P-50 B
C370	87-018-118-080		CAP,TC-U 82P-50 B
C373	87-010-401-080		CAP, ELECT 1-50V
C374	87-010-401-080		CAP, ELECT 1-50V
C382	87-010-401-080		CAP, ELECT 1-50V
C383	87-010-374-080		CAP, ELECT 47-10V
C385	87-010-405-080		CAP, ELECT 10-50V
C386	87-018-198-080		CAP,TC-U 2700P-16 X
C387	87-018-198-080		CAP,TC-U 2700P-16 X
C388	87-018-198-080		CAP,TC-U 2700P-16 X
C541	87-010-263-080		CAP, ELECT 100-10V
C542	87-010-374-080		CAP, ELECT 47-10V
C543	87-010-405-080		CAP, ELECT 10-50V
C544	87-010-401-080		CAP, ELECT 1-50V
C547	87-010-401-080		CAP, ELECT 1-50V
C548	87-010-401-080		CAP, ELECT 1-50V
C549	87-010-401-080		CAP, ELECT 1-50V
C550	87-010-401-080		CAP, ELECT 1-50V
C601	87-010-401-080		CAP, ELECT 1-50V
C602	87-010-401-080		CAP, ELECT 1-50V
C603	87-018-208-080		CAP 0.047-50F
C604	87-018-208-080		CAP 0.047-50F
C605	87-018-132-080		CAP, CER 2200P-16V
C606	87-018-132-080		CAP, CER 2200P-16V
C607	87-010-406-080		CAP, ELECT 22-50
C608	87-010-406-080		CAP, ELECT 22-50
C609	87-010-260-080		CAP, ELECT 47-25V
C610	87-018-209-080		CAP, CER 0.1-50V
C613	87-010-263-080		CAP, ELECT 100-10V
C614	87-010-263-080		CAP, ELECT 100-10V
C615	87-010-376-090		CAP 10-2200
C616	87-010-376-090		CAP 10-2200
C623	87-010-546-080		CAP, ELECT 0.33-50V
C624	87-010-546-080		CAP, ELECT 0.33-50V
C625	87-010-404-080		CAP, ELECT 4.7-50V
C641	87-010-248-080		CAP, ELECT 220-10V
C643	87-010-387-080		CAP,E 470-25 SME
C644	87-010-260-080		CAP, ELECT 47-25V
C720	87-010-405-080		CAP, ELECT 10-50V
C722	87-010-385-080		CAP, ELECT 220-25V
C723	87-010-248-080		CAP, ELECT 220-10V
C724	87-018-205-080		CAP, CERA-SOL 0.022
C726	87-010-404-080		CAP, ELECT 4.7-50V
C727	87-010-401-080		CAP, ELECT 1-50V
C728	87-010-221-080		CAP, ELECT 470-10V
C729	87-010-237-080		CAP,E 1000-16 M 11L SME
C741	87-010-384-080		CAP, ELECT 100-25V
C750	87-010-404-080		CAP, ELECT 4.7-50V
C751	87-010-404-080		CAP, ELECT 4.7-50V
C753	87-010-385-080		CAP, ELECT 220-25V
C754	87-010-404-080		CAP, ELECT 4.7-50V
C761	87-010-928-090		CAP,E 4700-25 SMG
C800	87-010-378-080		CAP, ELECT 10-16V
CF1	87-A91-094-010		FLTR,CDA10.7 MG80A
CF2	82-785-747-080		CF,MS2 GHY,R
CF3	82-785-747-080		CF,MS2 GHY,R
CN201	87-099-719-010		CONN,30P TYK-B(X)
CN203	87-A60-060-010		CONN,07P V 9604S-07C
CN301	87-A60-622-010		CONN,5P V 2MM JMT
CN302	87-A60-621-010		CONN,4P V 2MM JMT
CN701	87-A60-621-010		CONN,4P V 2MM JMT
CN751	87-A60-626-010		CONN,9P V 2MM JMT
⚠IC651	87-001-132-010		FUSE, ICP-N38
⚠ICP705	87-002-330-080		PROTECTOR,ICP-N5

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
J202	87-009-610-010		JACK PIN 2P H EARH
J601	87-A60-420-010		JACK,3.5 ST (MSC)
J602	87-099-443-010		TERMINAL,SPKR 4P
L2	87-A50-347-010		COIL,FM BPF EX
L3	8Z-CT4-616-010		BAR-ANT,MW2B
L4	87-A50-420-010		COIL,MW OSC(SYN)
L5	87-A50-424-010		COIL,FM RF EX(SYN)
L6	87-A50-454-010		COIL,FM OSC U(SYN)
L7	87-A91-308-010		FLTR,PCFAZH- 450T (TOK)
L8	87-005-849-080		COIL,10UH(CECS)
L9	87-005-849-080		COIL,10UH(CECS)
L331	87-007-342-010		COIL,OSC 85K BIAS
L601	87-A50-087-080		COIL,100UH (CECS)
L602	87-A50-087-080		COIL,100UH (CECS)
SCR3	87-A40-616-080		VARI-CAP,SVC384(S/T)
SCR4	87-A40-615-040		VARI-CAP,KV1311NT
SCR5	87-A40-615-040		VARI-CAP,KV1311NT
SFR751	87-024-350-080		SFR 2.2K DIA 6H
TC1	87-011-220-080		TRIMMER CAP 20P VTC
X1	87-A70-061-010		VIB,XTAL 4.500MHZ CSA-309

FRONT C.B

C101	87-010-263-080		CAP, ELECT 100-10V
C102	87-010-196-080		CHIP CAPACITOR,0.1-25
C103	87-010-248-080		CAP, ELECT 220-10V
C104	87-010-248-080		CAP, ELECT 220-10V
C105	87-010-196-080		CHIP CAPACITOR,0.1-25
C106	87-010-196-080		CHIP CAPACITOR,0.1-25
C107	87-010-452-080		C-CAP,1-16 Z F GRM42-6
C108	87-010-321-080		CHIP CAPACITOR,82P(J)
C109	87-018-115-080		CAP, CER 47P-50V
C110	87-010-321-080		CHIP CAPACITOR,82P(J)
C111	87-010-312-080		C-CAP,S 15P-50 CH
C112	87-010-314-080		C-CAP,S 22P-50V
C113	87-010-178-080		CHIP CAP 1000P
C115	87-010-401-080		CAP, ELECT 1-50V
C116	87-010-400-080		CAP, ELECT 0.47-50V
C117	87-010-196-080		CHIP CAPACITOR,0.1-25
C121	87-010-196-080		CHIP CAPACITOR,0.1-25
C122	87-010-196-080		CHIP CAPACITOR,0.1-25
C123	87-010-196-080		CHIP CAPACITOR,0.1-25
C124	87-010-197-080		CAP, CHIP 0.01 DM
C125	87-018-209-080		CAP, CER 0.1-50V
C126	87-018-209-080		CAP, CER 0.1-50V
C127	87-018-209-080		CAP, CER 0.1-50V
C128	87-010-196-080		CHIP CAPACITOR,0.1-25
C129	87-010-178-080		CHIP CAP 1000P
C130	87-010-260-080		CAP, ELECT 47-25V
C131	87-010-400-080		CAP, ELECT 0.47-50V
C133	87-010-405-080		CAP, ELECT 10-50V
C134	87-010-196-080		CHIP CAPACITOR,0.1-25
C135	87-010-196-080		CHIP CAPACITOR,0.1-25
C136	87-010-196-080		CHIP CAPACITOR,0.1-25
C137	87-010-248-080		CAP, ELECT 220-10V
C140	87-012-358-080		C-CAP,S 0.47-10 Z F
C141	87-010-196-080		CHIP CAPACITOR,0.1-25
C142	87-010-196-080		CHIP CAPACITOR,0.1-25
C143	87-010-196-080		CHIP CAPACITOR,0.1-25
C144	87-010-196-080		CHIP CAPACITOR,0.1-25
C145	87-010-196-080		CHIP CAPACITOR,0.1-25
C150	87-010-405-080		CAP, ELECT 10-50V
C401	87-010-182-080		C-CAP,S 2200P-50 B
C402	87-010-186-080		CAP,CHIP 4700P
C403	87-012-154-080		C-CAP,S 150P-50 CH
C404	87-010-401-080		CAP, ELECT 1-50V
C405	87-010-545-080		CAP, ELECT 0.22-50V
C406	87-010-178-080		CHIP CAP 1000P
C407	87-010-405-080		CAP, ELECT 10-50V
C408	87-010-260-080		CAP, ELECT 47-25V

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C409	87-010-248-080		CAP, ELECT 220-10V
C410	87-010-405-080		CAP, ELECT 10-50V
C411	87-018-209-080		CAP, CER 0.1-50V
C414	87-012-153-080		C-CAP,S 120P-50 CH
CN101	87-A60-058-010		CONN,10P V 9604S-10C
CN102	87-099-720-010		CONN,30P TYK-B(P)
CN103	87-099-759-010		CONN,21P H 9604
D124	87-001-519-010		LIGHT EMITTING DIODE,SLR-37
D132	87-A40-161-010		LED,L-1154SGD
D133	87-A40-161-010		LED,L-1154SGD
D134	87-A40-161-010		LED,L-1154SGD
D135	87-A40-161-010		LED,L-1154SGD
D136	87-A40-161-010		LED,L-1154SGD
D137	87-A40-161-010		LED,L-1154SGD
D138	87-A40-161-010		LED,L-1154SGD
D141	87-001-519-010		LED,SLR-37VR3F RED
D142	87-001-519-010		LED,SLR-37VR3F RED
D143	87-001-519-010		LED,SLR-37VR3F RED
D144	87-A40-410-010		LED,SEL2515C PGRN
D145	87-A40-410-010		LED,SEL2515C PGRN
D146	87-A40-410-010		LED,SEL2515C PGRN
D147	87-A40-410-010		LED,SEL2515C PGRN
J401	87-A60-651-010		JACK,3.5MONO
L101	87-003-171-010		COIL,15UH TROIDAL
L103	87-003-171-010		COIL,15UH TROIDAL
L401	87-A50-067-080		COIL,1.00UH (CECS)
LCD101	8Z-CT4-607-010		LCD,AIW4176
S1100	87-A91-024-080		SW,TACT KSH0611BT
S1101	87-A91-024-080		SW,TACT KSH0611BT
S1102	87-A91-024-080		SW,TACT KSH0611BT
S1103	87-A91-024-080		SW,TACT KSH0611BT
S1104	87-A91-024-080		SW,TACT KSH0611BT
S1105	87-A91-024-080		SW,TACT KSH0611BT
S1106	87-A91-024-080		SW,TACT KSH0611BT
S1107	87-A91-024-080		SW,TACT KSH0611BT
S1108	87-A91-024-080		SW,TACT KSH0611BT
S1109	87-A91-024-080		SW,TACT KSH0611BT
S1110	87-A91-024-080		SW,TACT KSH0611BT
S1111	87-A91-024-080		SW,TACT KSH0611BT
S1112	87-A91-024-080		SW,TACT KSH0611BT
S1120	87-A91-024-080		SW,TACT KSH0611BT
VR401	82-NK7-615-010		VR,10KA RK11K1130
X101	87-030-376-080		VIB,CER CSA5.76MG200
X102	87-030-273-010		VIB,XTAL 32.768K5PPM

LED C.B

C138	87-010-248-080		CAP, ELECT 220-10V
C139	87-010-196-080		CHIP CAPACITOR,0.1-25
CN1151	87-A60-077-010		CONN,10P H 9604S-10F
D1151	87-A40-639-010		LED,SML72420C Y-G/R
D1152	87-A40-639-010		LED,SML72420C Y-G/R
D1153	87-A40-639-010		LED,SML72420C Y-G/R
D1154	87-A40-639-010		LED,SML72420C Y-G/R
D1155	87-A40-639-010		LED,SML72420C Y-G/R
D1156	87-A40-639-010		LED,SML72420C Y-G/R
D1157	87-A40-639-010		LED,SML72420C Y-G/R
D1158	87-A40-639-010		LED,SML72420C Y-G/R
D1159	87-A40-639-010		LED,SML72420C Y-G/R
D1160	87-A40-639-010		LED,SML72420C Y-G/R
D1161	87-A40-639-010		LED,SML72420C Y-G/R
D1162	87-A40-639-010		LED,SML72420C Y-G/R
D1163	87-A40-639-010		LED,SML72420C Y-G/R
D1164	87-A40-639-010		LED,SML72420C Y-G/R
D1165	87-A40-639-010		LED,SML72420C Y-G/R
S1151	87-A91-024-080		SW,TACT KSH0611BT
S1152	87-A91-024-080		SW,TACT KSH0611BT
S1153	87-A91-024-080		SW,TACT KSH0611BT
S1154	87-A91-024-080		SW,TACT KSH0611BT
S1155	87-A91-024-080		SW,TACT KSH0611BT
S1156	87-A91-024-080		SW,TACT KSH0611BT
S1157	87-A91-024-080		SW,TACT KSH0611BT
S1158	87-A91-024-080		SW,TACT KSH0611BT
S1159	87-A91-024-080		SW,TACT KSH0611BT
S1160	87-A91-024-080		SW,TACT KSH0611BT
S1161	87-A91-024-080		SW,TACT KSH0611BT
S1162	87-A91-024-080		SW,TACT KSH0611BT

CD C.B

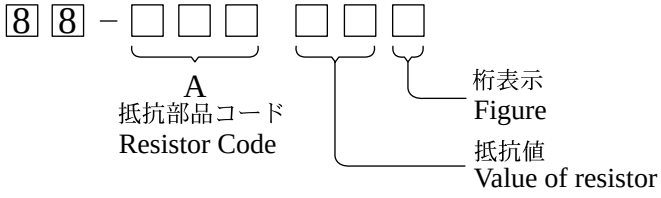
C1	87-010-403-080		CAP, ELECT 3.3-50V
C2	87-010-197-080		CAP, CHIP 0.01 DM
C3	87-010-263-080		CAP, ELECT 100-10V
C4	87-010-248-080		CAP, ELECT 220-10V
C5	87-010-197-080		CAP, CHIP 0.01 DM
C6	87-010-374-080		CAP, ELECT 47-10V
C7	87-012-349-080		C-CAP,S 1000P-50 CH
C8	87-010-198-080		CAP, CHIP 0.022
C9	87-010-248-080		CAP, ELECT 220-10V
C10	87-010-263-080		CAP, ELECT 100-10V
C12	87-010-401-080		CAP, ELECT 1-50V
C13	87-010-193-080		CHIP CAPACITOR,0.033
C14	87-010-405-080		CAP, ELECT 10-50V
C16	87-010-491-040		CAP, E 0.22-50 GAS
C17	87-012-157-080		C-CAP,S 330P-50 CH
C18	87-010-213-080		C-CAP,S 0.015-50 B
C20	87-010-193-080		CHIP CAPACITOR,0.033
C22	87-010-183-080		C-CAP,S 2700P-50 B
C23	87-010-956-080		CHIP-CAP,S 0.068-25B
C25	87-010-994-080		C-CAP,S 680P-50 CH
C29	87-010-186-080		CAP,CHIP 4700P
C30	87-012-156-080		C-CAP,S 220P-50 CH
C31	87-010-400-080		CAP, ELECT 0.47-50V
C32	87-010-374-080		CAP, ELECT 47-10V
C33	87-010-401-080		CAP, ELECT 1-50V
C34	87-010-184-080		CHIP CAPACITOR 3300P(K)
C35	87-010-197-080		CAP, CHIP 0.01 DM
C36	87-010-374-080		CAP, ELECT 47-10V
C37	87-010-404-080		CAP, ELECT 4.7-50V
C38	87-010-196-080		CHIP CAPACITOR,0.1-25
C40	87-010-145-080		C-CAP,S 1P-50 CH
C42	87-010-312-080		C-CAP,S 15P-50 CH
C45	87-010-196-080		CHIP CAPACITOR,0.1-25
C46	87-010-196-080		CHIP CAPACITOR,0.1-25
C47	87-010-196-080		CHIP CAPACITOR,0.1-25
C48	87-010-315-080		C-CAP,S 27P-50 CH
C50	87-012-140-080		CAP 470P
C51	87-012-156-080		C-CAP,S 220P-50 CH
C52	87-012-140-080		CAP 470P
C53	87-010-322-080		C-CAP,S 100P-50 CH
C54	87-012-153-080		C-CAP,S 120P-50 CH
C55	87-010-263-080		CAP, ELECT 100-10V
C57	87-010-316-080		C-CAP,S 33P-50 CH
C58	87-010-316-080		C-CAP,S 33P-50 CH
C59	87-010-263-080		CAP, ELECT 100-10V
C60	87-010-196-080		CHIP CAPACITOR,0.1-25
C61	87-010-196-080		CHIP CAPACITOR,0.1-25
C62	87-010-221-080		CAP, ELECT 470-10V
C65	87-010-404-080		CAP, ELECT 4.7-50V
C66	87-010-196-080		CHIP CAPACITOR,0.1-25
C67	87-010-263-080		CAP, ELECT 100-10V
C68	87-010-322-080		C-CAP,S 100P-50 CH
C69	87-012-154-080		C-CAP,S 150P-50 CH
C75	87-010-197-080		CAP, CHIP 0.01 DM
C76	87-A10-102-080		CAP,E 1000-10 REA
C77	87-010-197-080		CAP, CHIP 0.01 DM
C78	87-010-221-080		CAP, ELECT 470-10V
C79	87-010-263-080		CAP, ELECT 100-10V
C80	87-010-197-080		CAP, CHIP 0.01 DM
C81	87-010-405-080		CAP, ELECT 10-50V

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C82	87-010-405-080		CAP, ELECT 10-50V
C83	87-010-181-080		CAP, CHIP S 1800P
C84	87-010-181-080		CAP, CHIP S 1800P
C90	87-010-196-080		CHIP CAPACITOR,0.1-25
C91	87-010-553-040		CAP,E 47-16 GAS
C92	87-010-552-040		CAP,E 22-16 GAS
C93	87-010-197-080		CAP, CHIP 0.01 DM
C94	87-015-819-080		CAPACITOR,0.01
C95	87-010-197-080		CAP, CHIP 0.01 DM
C98	87-010-197-080		CAP, CHIP 0.01 DM
C101	87-010-322-080		C-CAP,S 100P-50 CH
C102	87-010-322-080		C-CAP,S 100P-50 CH
C103	87-010-322-080		C-CAP,S 100P-50 CH
C104	87-010-322-080		C-CAP,S 100P-50 CH
C105	87-010-322-080		C-CAP,S 100P-50 CH
C110	87-010-196-080		CHIP CAPACITOR,0.1-25
C201	87-010-552-040		CAP,E 22-16 GAS
C211	87-010-552-040		CAP,E 22-16 GAS
C221	87-010-196-080		CHIP CAPACITOR,0.1-25
C222	87-010-405-080		CAP, ELECT 10-50V
C223	87-010-405-080		CAP, ELECT 10-50V
C224	87-010-196-080		CHIP CAPACITOR,0.1-25
C225	87-010-405-080		CAP, ELECT 10-50V
C226	87-010-405-080		CAP, ELECT 10-50V
C251	87-010-552-040		CAP,E 22-16 GAS
CN1	87-A60-424-010		CONN,16P V TOC-B
CN2	87-A60-081-010		CONN,06P H 9604S-06F
CN3	87-A60-945-010		CONN,21P H 6216-11
CN4	87-A60-080-010		CONN,07P H 9604S-07F
CN7	87-A60-081-010		CONN,06P H 9604S-06F
CN8	87-A60-083-010		CONN,04P H 9604S-04F
D221	87-070-288-010		LED,GL380
L1	87-003-102-080		COIL,10UH
L4	87-003-152-080		COIL,100UH
L5	87-003-152-080		COIL,100UH
PS231	85-ZG1-607-080		SNSR,GP1S24
SFR130	87-024-437-080		SFR100K,RH063EC
SW201	88-ZG5-606-010		SW,MODE MMS00420
SW204	87-A91-040-010		SW,LVR SSCF31P-1
X1	87-A70-046-010		VIB,XTAL 16.934MHZ

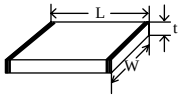
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
SENSOR C.B			
CN202	87-A60-946-010		CONN,4P H 6232
Q202	87-026-674-010		P-TR,PT4850F
Q212	87-026-674-010		P-TR,PT4850F
SWITCH C.B			
CN201	87-A60-946-010		CONN,4P H 6232
CN207	87-A60-081-010		CONN,06P H 9604S-06F
SW202	87-A90-967-010		SW,PUSH 3-2-1 MPU20160MLB0
TRAY C.B			
CN208	87-A60-083-010		CONN,04P H 9604S-04F
SW211	87-A91-333-010		SW,PUSH 1-1-1 MPU11570
SW212	87-A91-333-010		SW,PUSH 1-1-1 MPU11570
SW213	87-A91-333-010		SW,PUSH 1-1-1 MPU11570
LED C.B			
D321	87-070-319-010		LED,GL4800 RED
DRIVE C.B			
M20	87-045-358-019		MOT,RF-310TA 43
M21	87-045-356-019		MOT,RF-310TA 30
SW1	87-A90-042-019		SW,LEAF MSW 17310 MVPO
AC C.B			
C701	87-018-205-080		CAP, CERA-SOL 0.022
C702	87-018-205-080		CAP, CERA-SOL 0.022
C703	87-018-205-080		CAP, CERA-SOL 0.022
C704	87-018-205-080		CAP, CERA-SOL 0.022
⚠F380	87-035-488-010		FUSE,3.15A 125V D UL
⚠FC1	87-A90-505-080		FUSE CLAMP,TP00351-51
⚠FC2	87-A90-505-080		FUSE CLAMP,TP00351-51

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



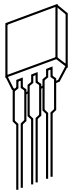
チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm) 外形／Form	L	W	t	抵抗コード : A Resistor Code : A
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

TRANSISTOR ILLUSTRATION

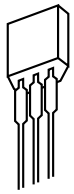
E C B

2SA952
2SA1318
2SC1815
2SC1923
2SC2001
2SD655
2SD1468
KTC3198



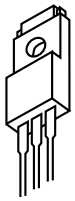
E C B

2SA933S
2SC1740S
DTA114YS
DTA144ES
DTA144TS
DTC114YS
DTC124XS
DTC143ES
DTC144ES
KTA1267



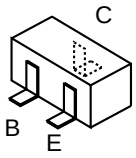
S D G

2SJ460
2SK2541



B C E

2SB1370



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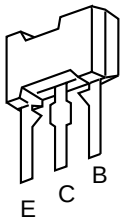
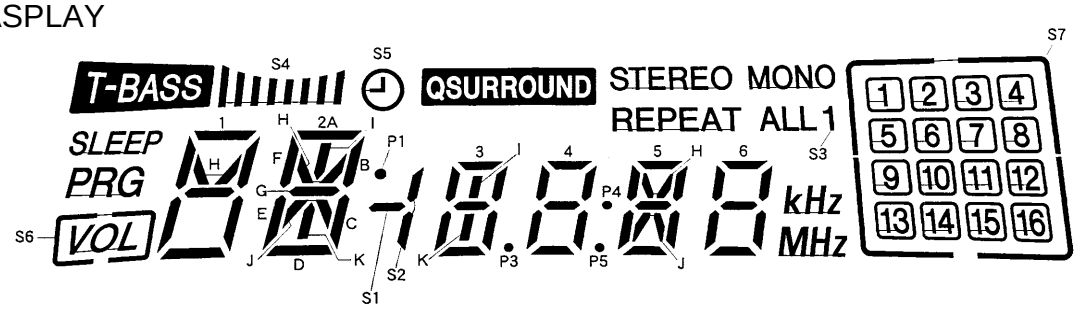
DTC114TK
DTC114YU
DTC124XK



2SB1443

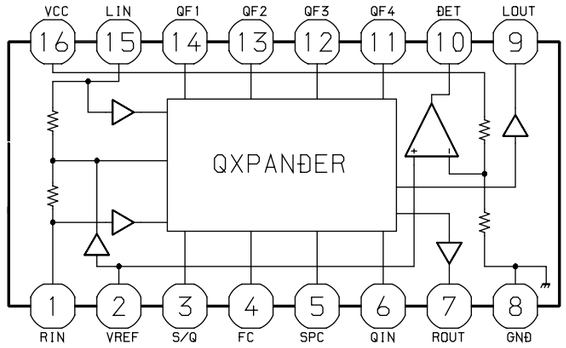
LCD DIASPLAY



No	COM1	COM2	COM3
1	COM1	———	———
2	———	COM2	———
3	———	———	COM3
4	S4	PRG	S6
5	1A	1F	1E
6	1H	1G	1D
7	T-BASS VOL	1B	1C
8	2 I	2A	STEREO
9	2G	2H	2F
10	2K	2J	2E
11	2B	2C	2D
12	MONO	P1	S1
13	REPEAT	S5	S2
14	3F	3G	3E
15	3A	3 I, K	3D
16	3B	3C	P3
17	4F	4G	4E
18	4B	4C	4D
19	4A	P4	P5
20	———	5F	5E
21	5A	5H, J	5G
22	5B	5C	5D
23	6F	6G	6E
24	6B	6C	6D
25	6A	kHz	MHz
26	5	9	13
27	6	10	14
28	7	11	15
29	8	12	16
30	4	3	2
31	S7	QSURROUND	1
32	ALL	SLEEP	S3

IC BLOCK DIAGRAMS

IC, MM1454XFBE



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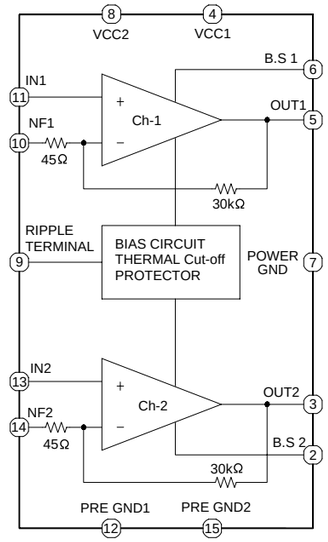
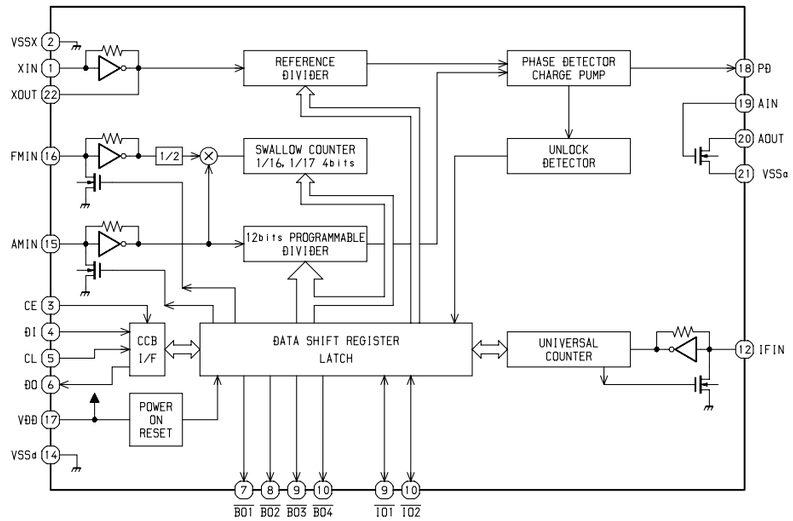
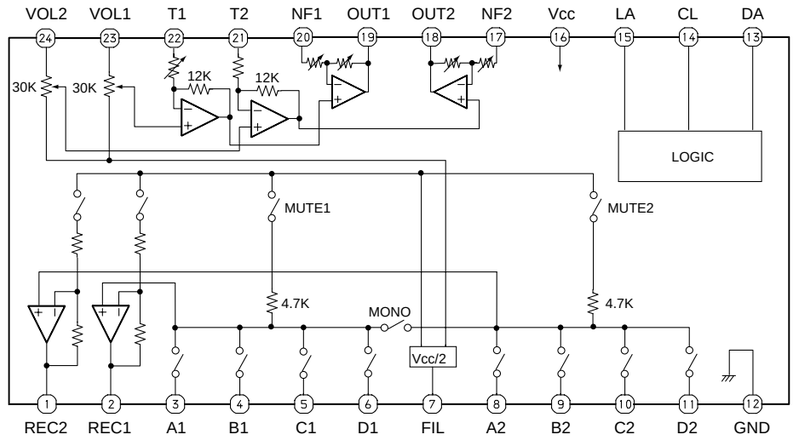


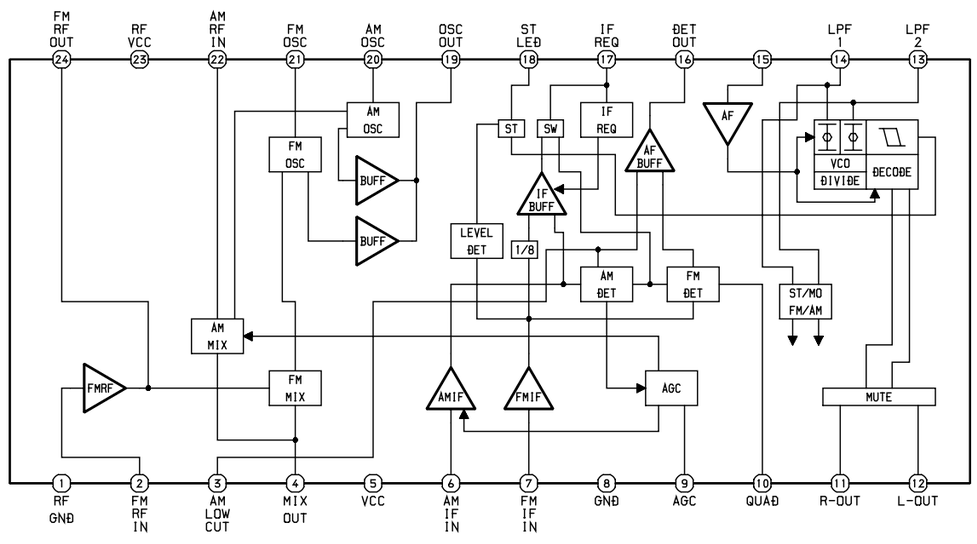
IC, LC72121M



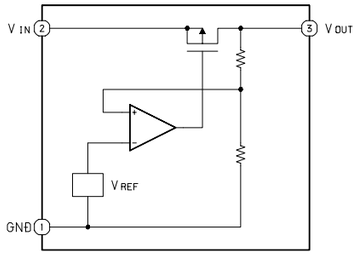
IC, BH3862FS



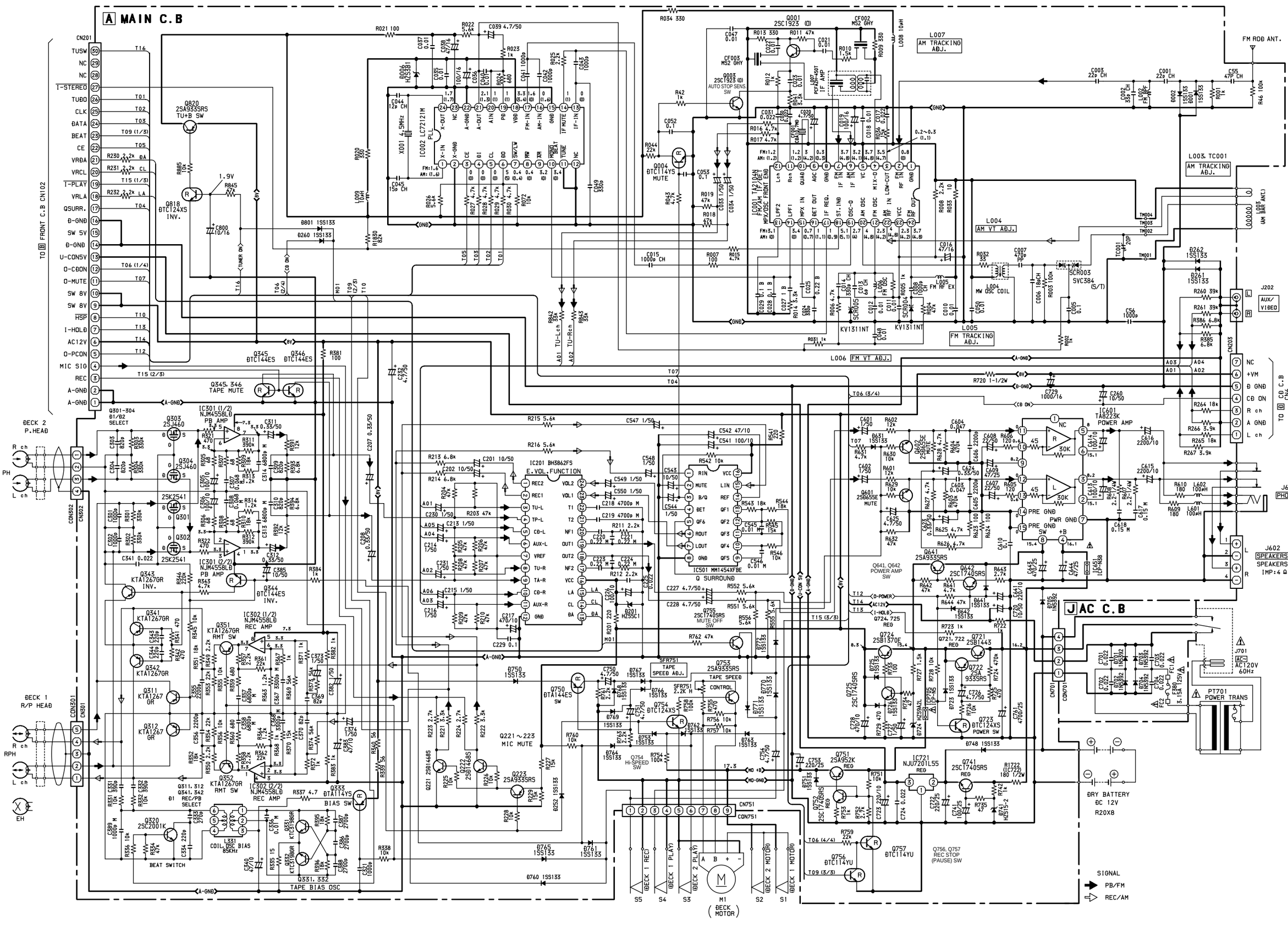
IC, TA2104AN



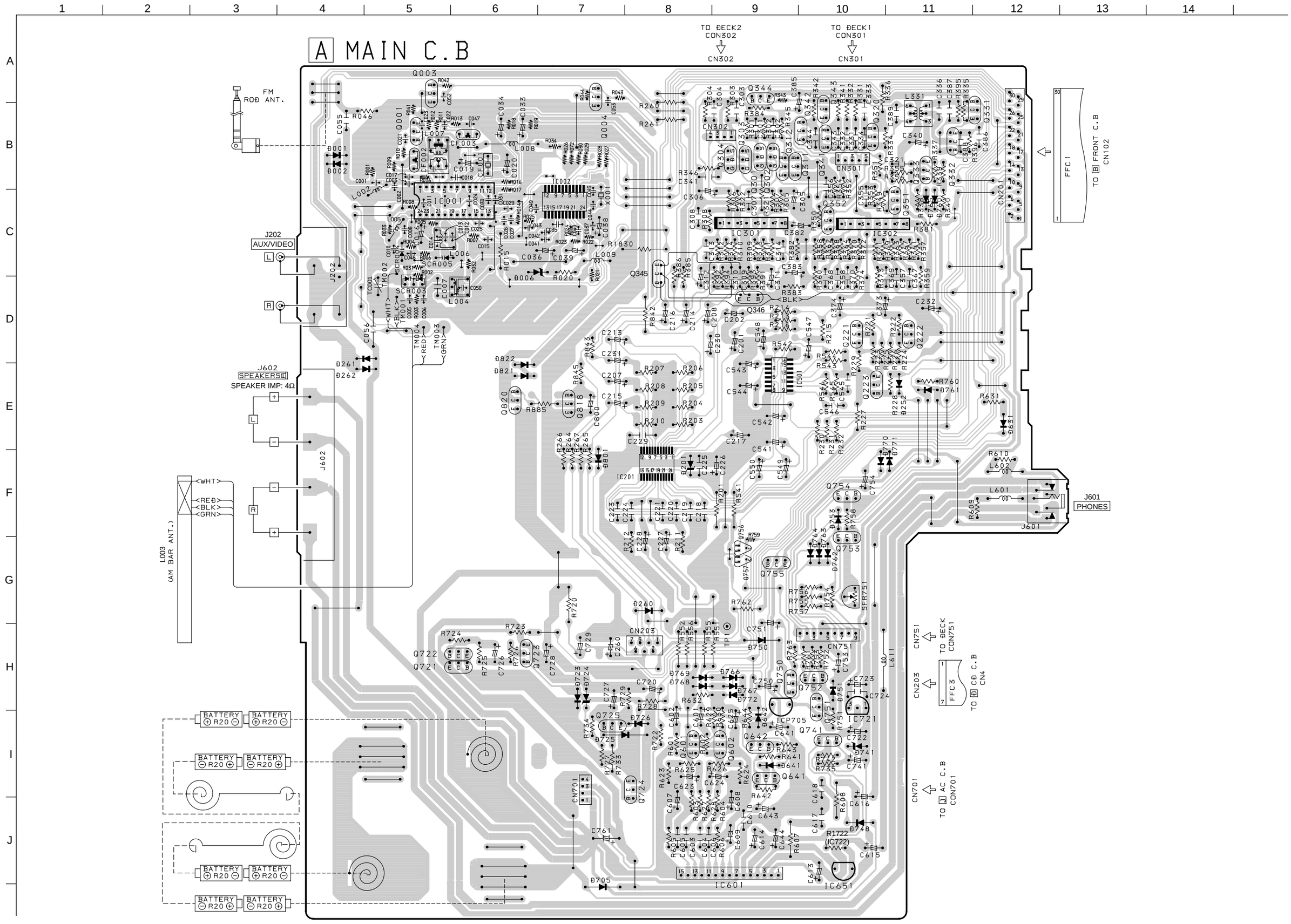
IC, NJU7201L55



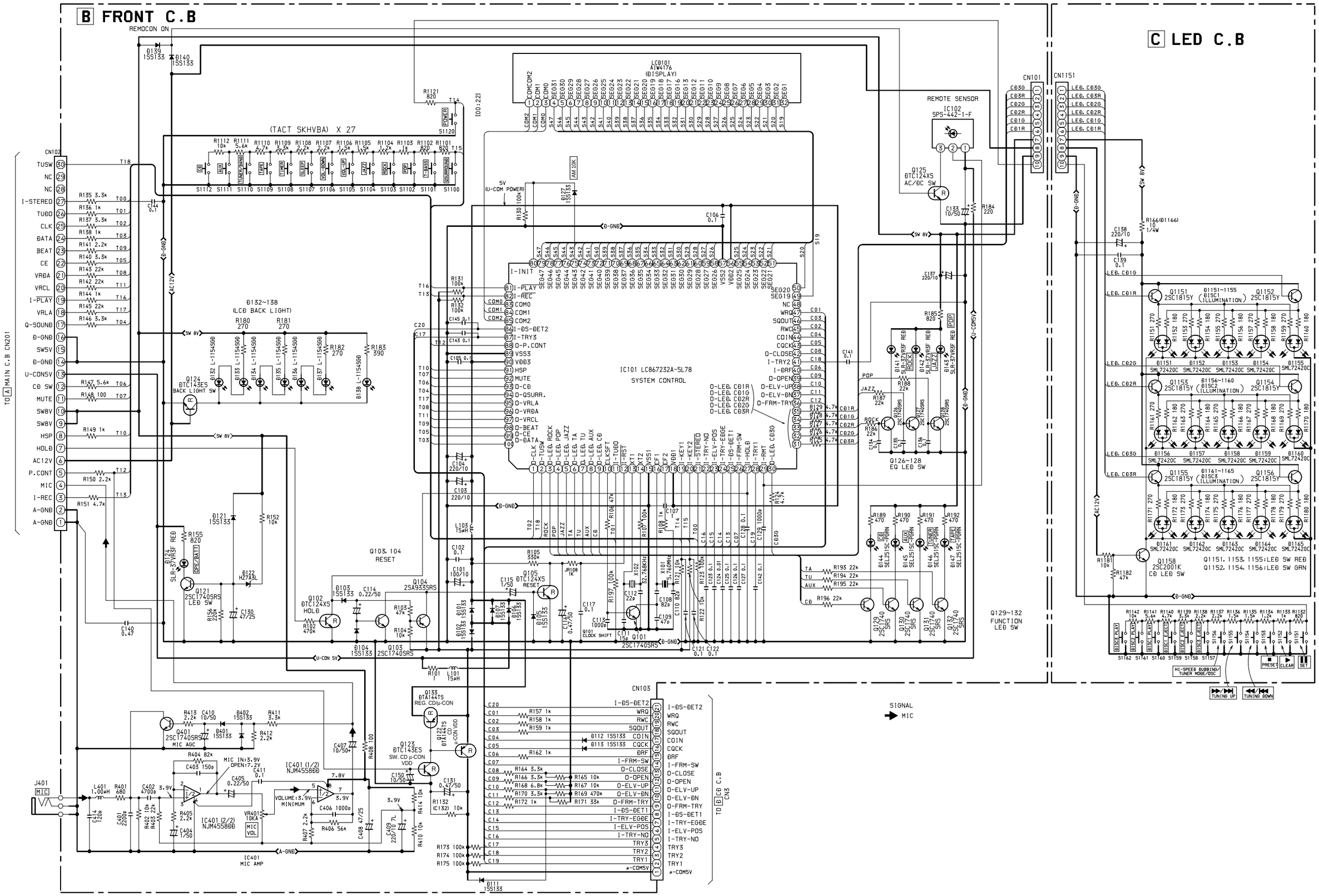
SCHEMATIC DIAGRAM-1 (MAIN SECTION)



WIRING-1 (MAIN C.B SECTION)



SCHEMATIC DIAGRAM-2 (FRONT/LED SECTION)



B FRONT C.B

S1102 Đ143 POP
S1103 Đ141 ROCK
S1104 Đ142 JAZZ
S1100 QSURROUNĐ
Đ132~Đ138 (LCĐ BACK LIGHT)
Đ124 OPE/BATT
S1120 POWER ⏻STANDBY/ON

S1101 T-BASS
LCĐ101 (ĐISPLAY)
IC102 (REMOTE SENSOR)

TO D CD C.B CN3 — FFC4
TO A MAIN C.B CN201 — FFC1
TO C LEĐ C.B CN1151 — FFC2

S1105 UP VOLUME DOWN S1106

VR401 MIC VOL
J401 MIC

S1112, Đ144 CĐ
S1111, Đ145 AUX
S1110, Đ146 TUNER/BAND
S1109, Đ147 TAPE
FUNCTION

S1107 SLEEP
S1108 TIMER

IC DESCRIPTION

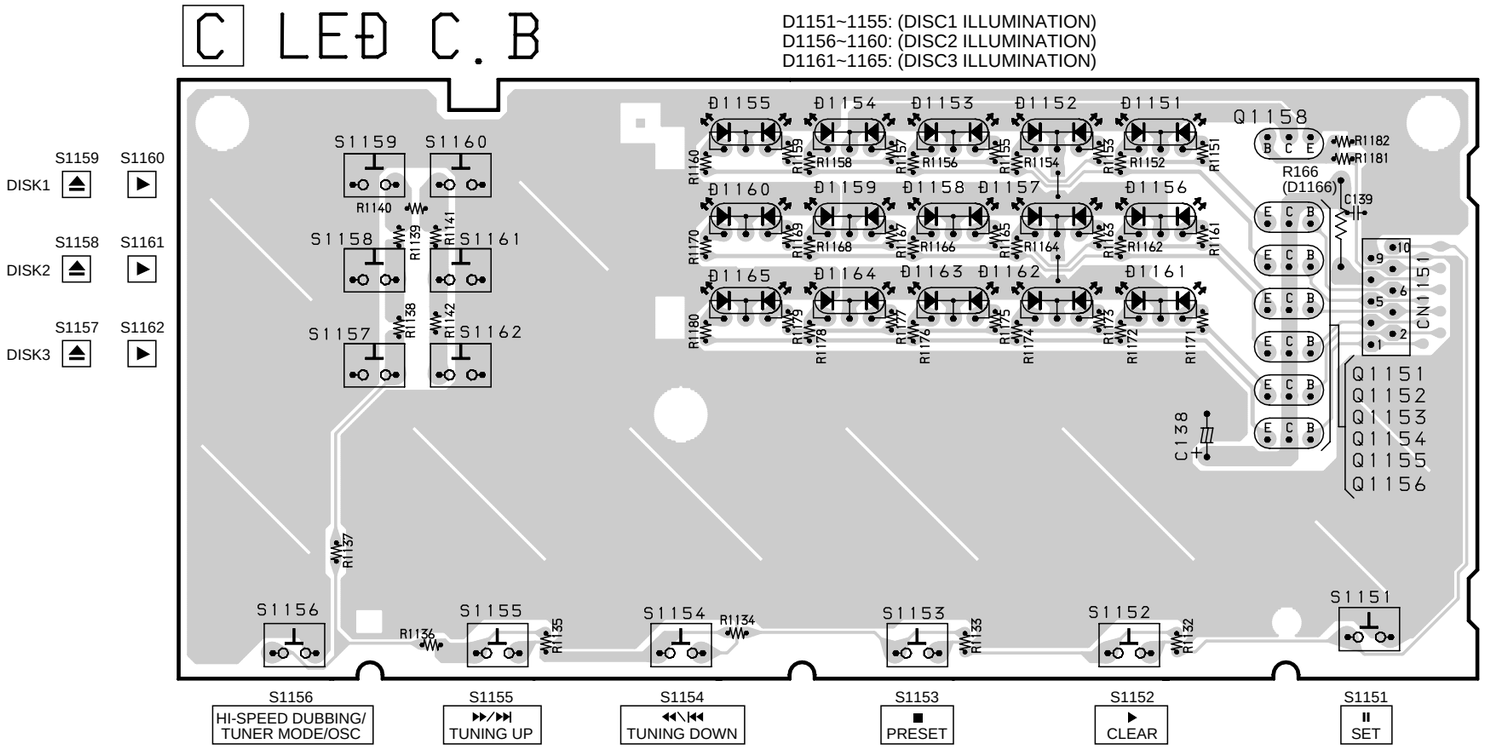
IC, LC867232A-5L78

Pin No.	Pin Name	I/O	Description
1	CLK	O	Clock output to TUNER PLL IC
2	TUSW	O	TUNER power switch
3	LED ROCK	O	LED lighting SW
4	LED POP		
5	LED JAZZ		
6	LED TA		
7	LED TU		
8	LED AUX		
9	LED CD		
10	CLKSFT	O	Microprocessor clock shift SW
11	TUDO	I	Data input from TUNER PLL IC
12	RST	I	Reset input
13	XT1	I	Crystal oscillator input for clock
14	XT2	O	Crystal oscillator output for clock
15	VSS1	–	Negative terminal of power supply
16	CF1	I	Ceramic oscillator input for microprocessor main clock
17	CF2	O	Ceramic oscillator output for microprocessor main clock
18	VDD1	–	Positive terminal of power supply
19, 20	KEY1, KEY2	I	Tact key AD input detection
21	STEREO	I	TUNER stereo reception detection input
22	TRY NO	I	CD mechanism tray number detection
23	ELV POS	I	CD mechanism elevator position detection
24	TRY EDGE	I	CD mechanism tray position detection
25	DS DET1	I	CD mechanism disc size detection
26	FRM SW	I	CD mechanism frame position detection
27	HOLD	I	Main power supply input detection
28	TRY1	I	CD mechanism tray 1 detection
29	RMT	I	Remote control signal reception pin
30	LED CD3G	O	LED lighting SW
31	LED CD3R		
32	LED CD2G		
33	LED CD2R		
34	LED CD1G		
35	LED CD1R		
36	FRM/TRY	O	CD frame/tray drive motor speed control
37	ELV-DN	O	CD mechanism elevator motor control: Down side
38	ELV-UP	O	CD mechanism elevator motor control: Up side
39	OPEN	O	CD mechanism frame/tray motor control: Open side
40	DRF	I	Detects level of RF signal from CD ASP.
41	TRY2	I	CD mechanism tray 2 detection
42	CLOSE	O	CD mechanism frame/tray motor control: Close side
43	CQCK	O	Serial communication clock output to CD DSP

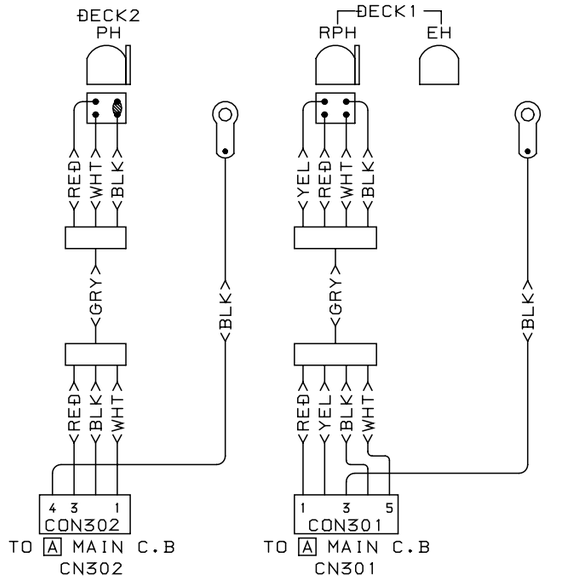
Pin No.	Pin Name	I/O	Description
44	COIN	O	Serial data output to CD DSP
45	RWC	O	Read/write control to CD DSP
46	SQOUT	O	Subcode Q data input from CD DSP
47	WRQ	O	CD DSP subcode Q output standby check input
48	NC	–	Not connected.
49 ~ 55	SEG19 ~ SEG25	O	LCD segment output
56	VDD2	–	Positive terminal of power supply
57	VSS2	–	Negative terminal of power supply
58 ~ 79	SEG26 ~ SEG47	O	LCD segment output
80	INIT	I	Microprocessor initial setting read
81	PLAY	I	TAPE playback detection
82	REC	I	TAPE recording detection
83 ~ 85	COM0 ~ COM2	O	LCD common output
86	DS DET2	I	CD mechanism disc size detection
87	TRY3	I	CD mechanism tray 3 detection
88	P, CONT	O	Main power supply input detection
89	VSS3	–	Negative terminal of power supply
90	VDD3	–	Positive terminal of power supply
91	HSP	O	TAPE dubbing high speed mode SW
92	MUTE	O	Audio signal muting SW
93	CD	O	CD power SW
94	QSURR	O	Q SURROUND SW
95	VRLA	O	Audio control IC data latch
96	VRDA	O	Data output to audio control IC
97	VRCL	O	Clock output to audio control IC
98	BEAT	O	TAPE BEAT switching
99	CE	O	TUNER PLL IC chip enable
100	DATA	O	Data output to TUNER PLL IC

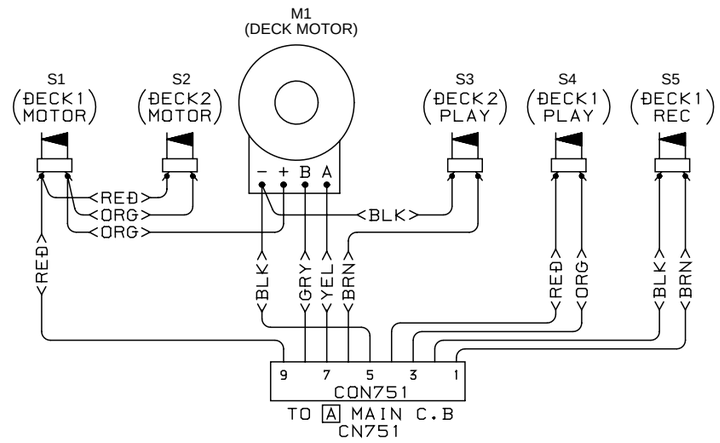
C LED C.B

D1151~1155: (DISC1 ILLUMINATION)
D1156~1160: (DISC2 ILLUMINATION)
D1161~1165: (DISC3 ILLUMINATION)

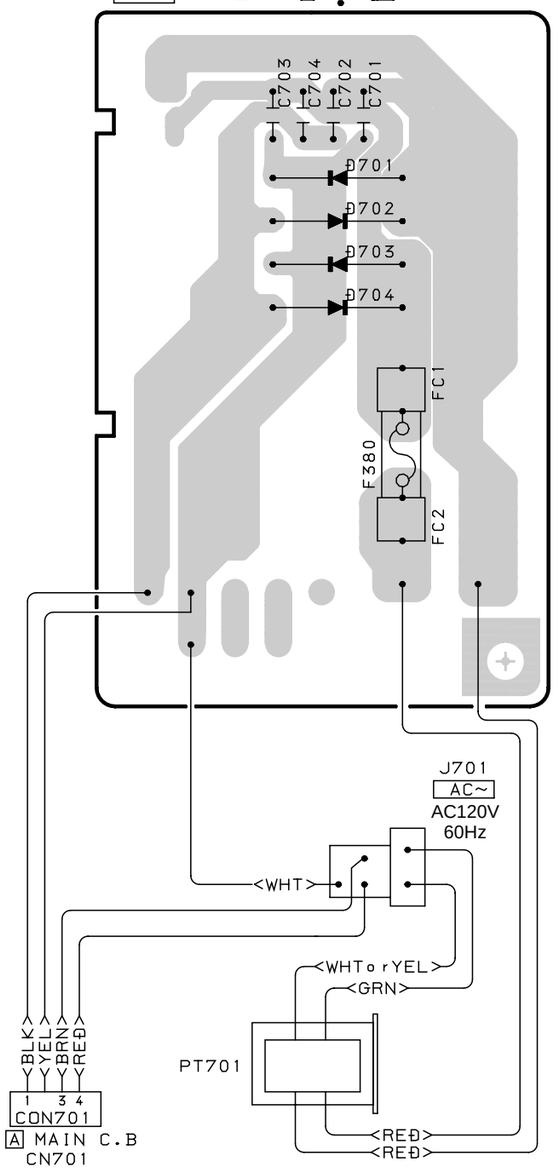


TO B FRONT C.B CN101

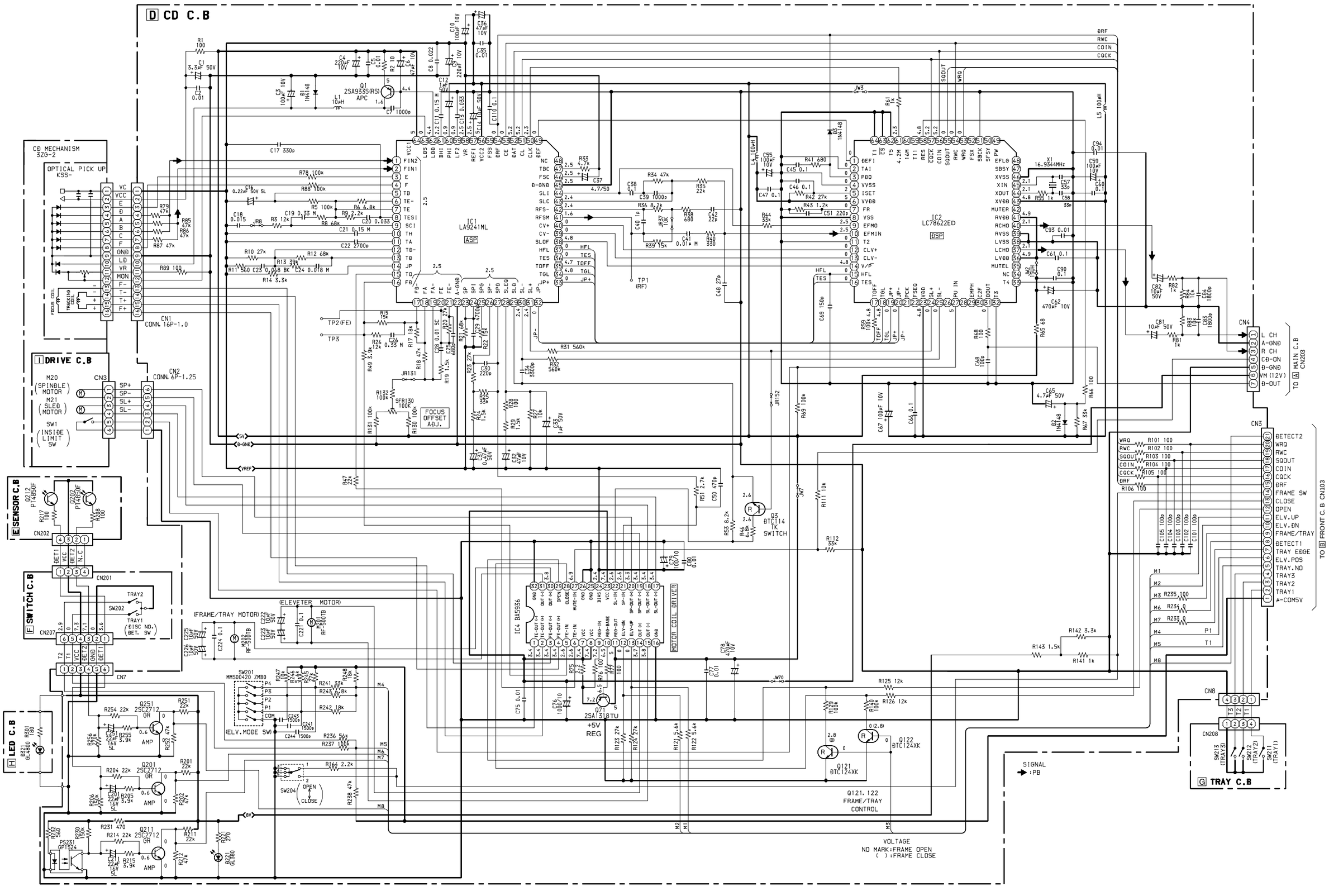


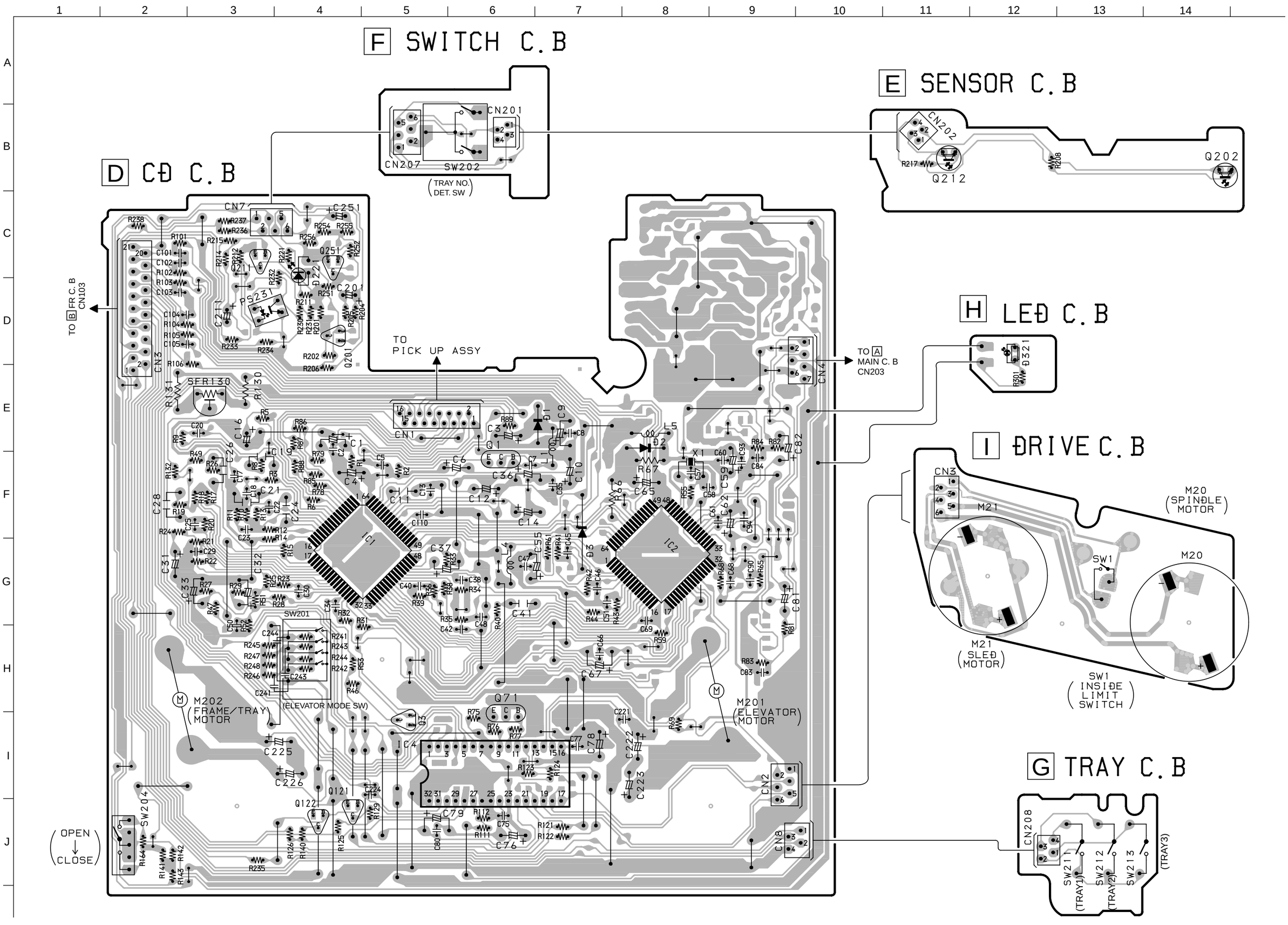


J AC C.B



SCHEMATIC DIAGRAM-3 (CD SECTION)




F SWITCH C.B
CN201
CN207
SW202
(TRAY NO. DET. SW)
E SENSOR C.B
CN202
R217
Q212
R208
Q202
D CD C.B
CN7
TO B FR C.B CN103
CN3
TO PICK UP ASSY
CN1
TO A MAIN C.B CN203
CN4
H LED C.B
D321
R301
I DRIVE C.B
CN3
M21
M20 (SPINDLE MOTOR)
SW1
M21 (SLED MOTOR)
SW1 INSIDE LIMIT SWITCH
G TRAY C.B
CN208
SW211 (TRAY1)
SW212 (TRAY2)
SW213 (TRAY3)
SW201
(ELEVATOR MODE SW)
M202 (FRAME/TRAY MOTOR)
M201 (ELEVATOR MOTOR)
SW204
(OPEN ↓ CLOSE)
IC1
IC2
IC4
CN2
CN8
SFR130

IC DESCRIPTION-2

IC, LC78622ED

Pin No.	Pin Name	I/O	Description	
1	DEFI	I	Defect sense signal (DEF) input pin. (Connect to 0V when not used).	
2	TAI	I	For PLL.	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.
3	PDO	O		Phase comparator output pin to control external VCO.
4	VVSS	—		GND pin for built-in VCO. Be sure to connect to 0V.
5	ISET	I		Pin to which external resistor adjusting the PD0 output current.
6	VVDD	—		Power supply pin for built-in VCO.
7	FR	I		Pin for VCO frequency range adjustment.
8	VSS	—	Digital system GND. Be sure to connect to 0V.	
9	EFMO	O	For slice level control.	EFM signal output pin.
10	EFMIN	I		EFM signal input pin.
11	T2	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.	
12, 13	CLV+, CLK–	O	Disc motor control output. Three level output is possible using command.	
14	V/$\overline{P}$	O	Rough servo or phase control automatic selection monitoring output pin. Rough servo at H. Phase servo at L.	
15	HFL	I	Track detect signal input pin. Schmidt input.	
16	TES	I	Tracking error signal input pin. Schmidt input.	
17	TOFF	O	Tracking OFF output pin.	
18	TGL	O	Tracking gain selection output pin. Gain boost at L.	
19, 20	JP+, JP–	O	Track jump control signal output pin. Three level output is possible using command.	
21	PCK	O	EFM data playback clock monitoring pin 4.3218 MHz when phase is locked in.	
22	FSEQ	O	Sync signal detection output pin. H when the sync signal which is detected from EFM signal and thesync signal which is internally generated agree.	
23	VDD	—	Digital system power supply pin.	
24	SL+	O	Moves the sled to outer circumference.	
25	SL–	O	Moves the sled to inner circumference.	
26	—	—	Not connected.	
27	PUIN	I	CD pickup inner switch detection.	
28	—	—	Not connected.	
29	EMPH	O	De-emphasis monitor output pin. De-emphasis disc is being played back at H.	
30	C2F	O	C2 flag output pin.	
31	DOUT	O	DIGITAL OUT output pin. (EIAJ format).	
32, 33	T3, T4	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.	
34	N.C.	—	Not used. Set the pin to open.	
35	MUTEL	O	L-channel 1-bit DAC.	L-channel mute output pin.
36	LVDD	—		L-channel power supply pin.
37	LCHO	O		L-channel output pin.
38	LVSS	—		L-channel GND. Be sure to connect to 0V.
39	RVSS	—	R-channel 1-bit DAC.	R-channel GND. Be sure to connect to 0V.
40	RCHO	O		R-channel output pin.
41	RVDD	—		R-channel power supply pin.
42	MUTER	O		R-channel mute output pin.

Pin No.	Pin Name	I/O	Description
43	XVDD	—	Crystal oscillator power supply pin.
44	XOUT	O	Pin to which external 16.9344 MHz crystal oscillator is connected.
45	XIN	I	
46	XVSS	—	Crystal oscillator GND pin. Be sure to connect to 0V.
47	SBSY	O	Subcode block sync signal output pin.
48	EFLG	O	C1, C2, single and dual correction monitoring pin.
49	PW	O	Subcode P, Q, R, S, T, U and W output pin.
50	SFSY	O	Subcode frame sync signal output pin. Falls down when subcode enters standby.
51	SBCK	I	Subcode read clock input pin. Schmidt input. (Be sure to connected to 0V when not in use.)
52	FSX	O	Pin outputting the 7.35 kHz sync signal which is generated by dividing frequency of crystal oscillator.
53	WRQ	O	Subcode Q output standby output pin.
54	RWC	I	Read/write control input pin. Schmidt input.
55	SQOUT	O	Subcode Q output pin.
56	COIN	I	Command input pin from microprocessor.
57	$\overline{CQCK}$	I	Command input read clock or subcode read input clock from SQOUT pin
58	$\overline{RES}$	I	LC78622 reset input pin. Set this pin to L once when the main power is turned on.
59	T11	O	Test signal output pin. Use this pin as open (normally L output).
60	16M	O	16.9344 MHz output pin.
61	4.2M	O	4.2336 MHz output pin.
62	T5	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.
63	$\overline{CS}$	I	Chip select signal input pin with built-in pull-down resistor. Be sure to connect to 0V while it is not controlling.
64	T1	I	Test signal input pin without built-in pull-down resistor. Be sure to connect to 0V.

IC, LA9241ML

Pin No.	Pin Name	I/O	Description
1	FIN2	I	Pin to which external pickup photo diode is connected. RF signal is created by adding with the FIN1 pin signal. FE signal is created by subtracting from the FIN1 pin signal.
2	FIN1	I	Pin to which external pickup photo diode is connected.
3	E	I	Pin to which external pickup photo diode is connected. TE signal is created by subtracting from the F pin signal.
4	F	I	Pin to which external pickup photo diode is connected.
5	TB	I	DC component of the TE signal is input.
6	TE–	I	Pin to which external resistor setting the TE signal gain is connected between the TE pin.
7	TE	O	TE signal output pin.
8	TESI	I	TES “Track Error Sense” comparator input pin. TE signal is passed through a band-pass filter then input.
9	SCI	I	Shock detection signal input pin.
10	TH	I	Tracking gain time constant setting pin.
11	TA	O	TA amplifier output pin.
12	TD–	I	Pin to which external tracking phase compensation constants are connected between the TD and VR pins.
13	TD	I	Tracking phase compensation setting pin.
14	JP	I	Tracking jump signal (kick pulse) amplitude setting pin.
15	TO	O	Tracking control signal output pin.
16	FD	O	Focusing control signal output pin.
17	FD–	I	Pin to which external focusing phase compensation constants are connected between the FD and FA pins.
18	FA	I	Pin to which external focusing phase compensation constants are connected between the FD– and FA– pins.
19	FA–	I	Pin to which external focusing phase compensation constants are connected between the FA and FE pins.
20	FE	O	FE signal output pin.
21	FE–	I	Pin to which external FE signal gain setting resistor is connected between the FE pin.
22	A-GND	—	Analog signal GND.
23	SP	O	Single ended output of the CV+ and CV– pin input signal.
24	SPI	I	Spindle amp input
25	SPG	I	Pin to which external spindle gain setting resistor in 12 cm mode is connected.
26	SP–	I	Pin to which external spindle phase compensation constants are connected together with SPD pin.
27	SPD	O	Spindle control signal output pin.
28	SLEQ	I	Pin to which external sled phase compensation constants are connected.
29	SLD	O	Sled control signal output pin.
30, 31	SL–, SL+	I	Sled advance signal input pin from microprocessor.
32, 33	JP–, JP+	I	Tracking jump signal input pin from DSP.
34	TGL	I	Tracking gain control signal input from DSP. Low gain when TGL = H.
35	TOFF	I	Tracking off control signal input pin from DSP. Off when TOFF = H.

Pin No.	Pin Name	I/O	Description
36	TES	O	Pin from which TES signal is output to DSP.
37	HFL	O	“High Frequency Level” is used to judge whether the main beam position is on top of bit or on top of mirror.
38	SLOF	I	Sled servo off control input pin.
39, 40	CV–, CV+	I	CLV error signal input pin from DSP.
41	RFSM	O	RF output pin.
42	RFS–	I	RF gain setting and EFM signal 3T compensation constant setting pin together with RFSM pin.
43	SLC	O	“Slice Level Control” is the output pin which controls the RF signal data slice level by DSP.
44	SLI	I	Input pin which control the data slice level by the DSP.
45	D-GND	—	Digital system GND.
46	FSC	O	Output pin to which external focus search smoothing capacitor is connected.
47	TBC	I	“Tracking Balance Control” EF balance variable range setting pin.
48	NC	—	No connection.
49	DEF	O	Disc defect detector output pin.
50	CLK	I	Reference clock input pin. 4.23 MHz of the DSP is input.
51	CL	I	Microprocessor command clock input pin.
52	DAT	I	Microprocessor command data input pin.
53	CE	I	Microprocessor command chip enable input pin.
54	DRF	O	“Detect RF” RF level detector output.
55	FSS	I	“Focus Search Select” focus search mode (± search/+ search) select pin.
56	VCC2	—	Servo system and digital system Vcc pin.
57	REFI	—	Pin to which external bypass capacitor for reference voltage is connected.
58	VR	O	Reference voltage output pin.
59	LF2	I	Disc defect detector time constant setting pin.
60	PH1	I	Pin to which external capacitor for RF signal peak holding is connected.
61	BH1	I	Pin to which external capacitor for RF signal bottom holding is connected.
62	LDD	O	APC circuit output pin.
63	LDS	I	APC circuit input pin.
64	VCC1	—	RF system Vcc pin.

TEST MODE

The CA-DW935M has two types of test mode: conventional CD test mode and new mechanism test mode.

1) Starting CD test mode

• Hold down the CD function key, and then plug the power cord into AC outlet: The CD test mode will start and "CD TES7" will appear.

• Each time the CD function key is pressed thereafter, the CD test mode and mechanism test mode will alternate.

"CD TES7" appears in CD test mode.

"MC TES7" appears in mechanism test mode.

2) Functions in CD test mode

Mode	Operation	Display	Action	Content
Start	to start test mode	CD TES7	–	–
Search		CD ----	Continuous focus search. PU lens repeats full swing. (Note 1)	APC circuit check Laser current measurement Focus error waveform check
Play		Track no. and play time	Normal play. Same operation as in search mode when TOC read is impossible.	Focus servo Tracking servo CLV servo Sled servo
Traverse		Track no. and play time	Playback pause status	Tracking servo OFF
Sled		CD TES7	Pickup moves to inner edge. Pickup moves to outer circumference.	Sled servo Mechanism operation check

Note 1: If focus search continues for 10 minutes or more, the driver IC could generate heat and the protection circuit could operate, resulting in no operation of CD player. In this case, turn power off, radiate heat for approx. 10 minutes, and then restart the CD player.

3) Mechanism test mode

• The following items can be checked in the mechanism test mode:

1. Checking mechanism operation

The elevator up/down and frame/tray open/close operations can be checked.

Operation to be checked	Operation button	Display
Elevator going up		E UP
Elevator going down		E DO
Frame opening	CD1 OPEN/CLOSE button	F OP
Frame closing	CD2 OPEN/CLOSE button	F CL
Tray opening	CD1 OPEN/CLOSE button	T OP
Tray closing	CD2 OPEN/CLOSE button	T CL

Note: When the elevator is at the top position, the frame will open or close, and when it is at positions other than top, the tray will open or close.

2. Checking status of switches and sensors
The switch/sensor ON/OFF status of mechanism can be checked using the display.

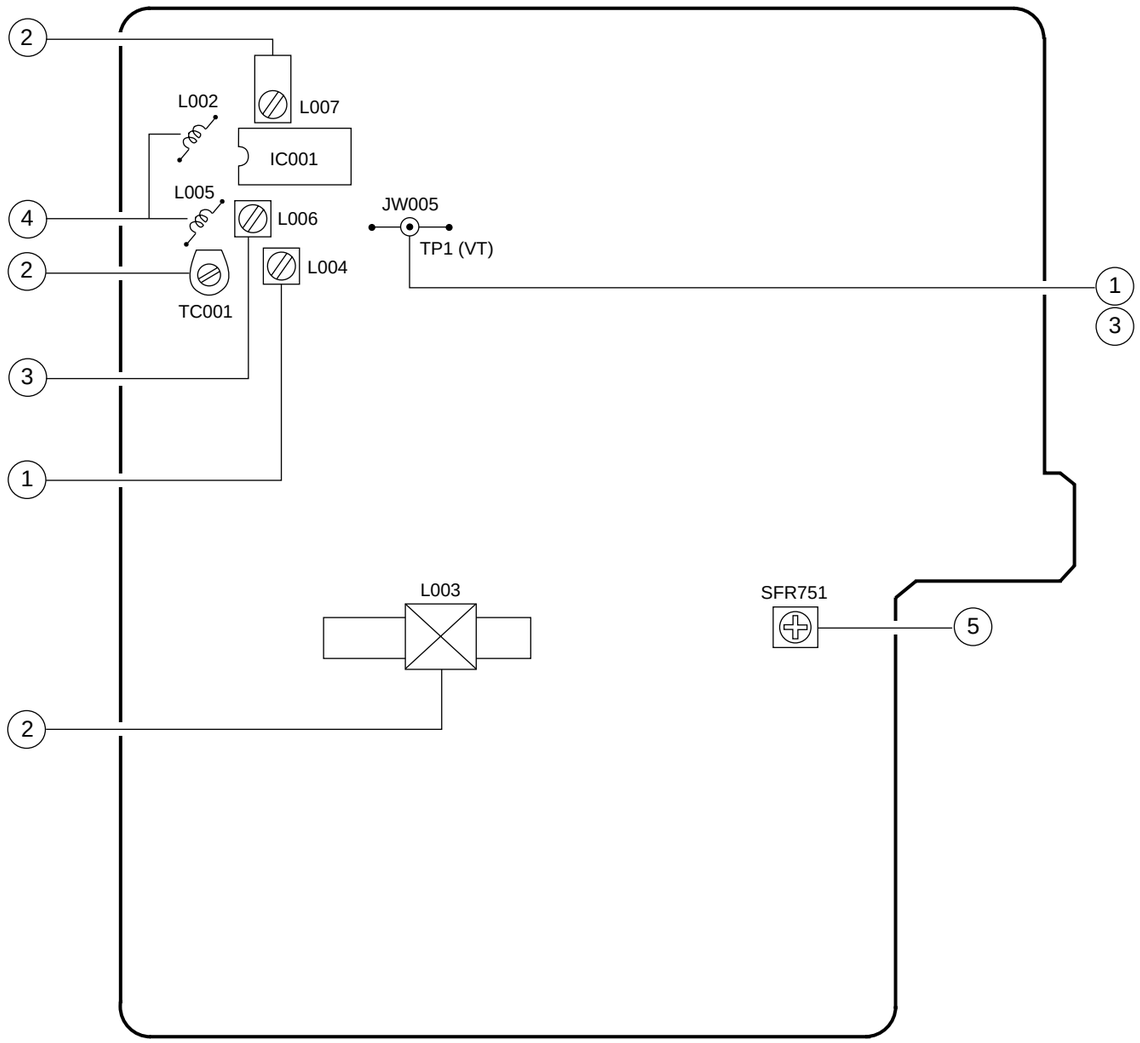
SW/Sensor	Ref. no.	SW/Sensor status	Display
Frame OPEN/CLOSE SW	SW204	Frame is at OPEN position.	
		Frame is at intermediate position.	
		Frame is at CLOSE position.	
Tray no. detection SW	SW202	Tray 1 is at PLAY position.	T-BASS VOL lights.
		Tray 2 is at PLAY position.	lights.
		Tray 3 is at PLAY position.	lights.
Elevator position detection SW	SW201	Elevator is at TOP position.	3 lights.
		Elevator is at CD3 position.	7 lights.
		Elevator is at CD2 position.	5 lights.
		Elevator is at CD1 position.	6 lights.
		Elevator is at PLAY position.	4 lights.
		Elevator is at UNLOCK position.	2 lights.
		Elevator is at TOP UNLOCK position.	1 lights.
		Elevator is at positions other than the above.	8 lights.
Tray detection SW	SW213	Tray 1 is in STOCK BOX.	REPEAT lights.
	SW212	Tray 2 is in STOCK BOX.	ALL lights.
	SW211	Tray 3 is in STOCK BOX.	1 lights.
Tray edge detection sensor	PS231	Frame/tray are at OPEN/CLOSE position.	STEREO lights.
		Frame/tray are at an intermediate position.	STEREO goes out.
Erroneous CD insertion	Q202	Tray/frame shade Q202.	MONO goes out.
prevention sensor	Q212	Tray/frame shade Q212.	SLEEP goes out.

Note: This set does not have the frame OPEN/CLOSE SW display.

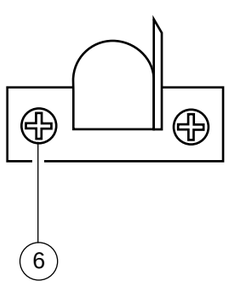
4) Releasing test mode
• Press the POWER button or unplug the power cord from the AC outlet to release the test mode.

Note: After operation is performed in the mechanism test mode, return the set to the first mechanism status to exit the test mode.

MAIN C.B



RPH (DECK1) / PH (DECK2)



<TUNER SECTION>

1. AM VT Adjustment
   Settings: • Test point: TP1 (VT)
   • Adjustment location: L004
   Method: Set to AM 1710 kHz and adjust L004 so that the test point becomes 6.0 ± 0.05 V.

2. AM Tracking Adjustment
   L003, L007 ..... 600 kHz
   TC1 ..... 1400 kHz

3. FM VT Adjustment
   Settngs: • Test point: TP1 (VT)
   • Adjustment location: L006
   Method: Set to FM 108.0 MHz and adjust L006 so that test point becomes 6.0 ± 0.3 V.

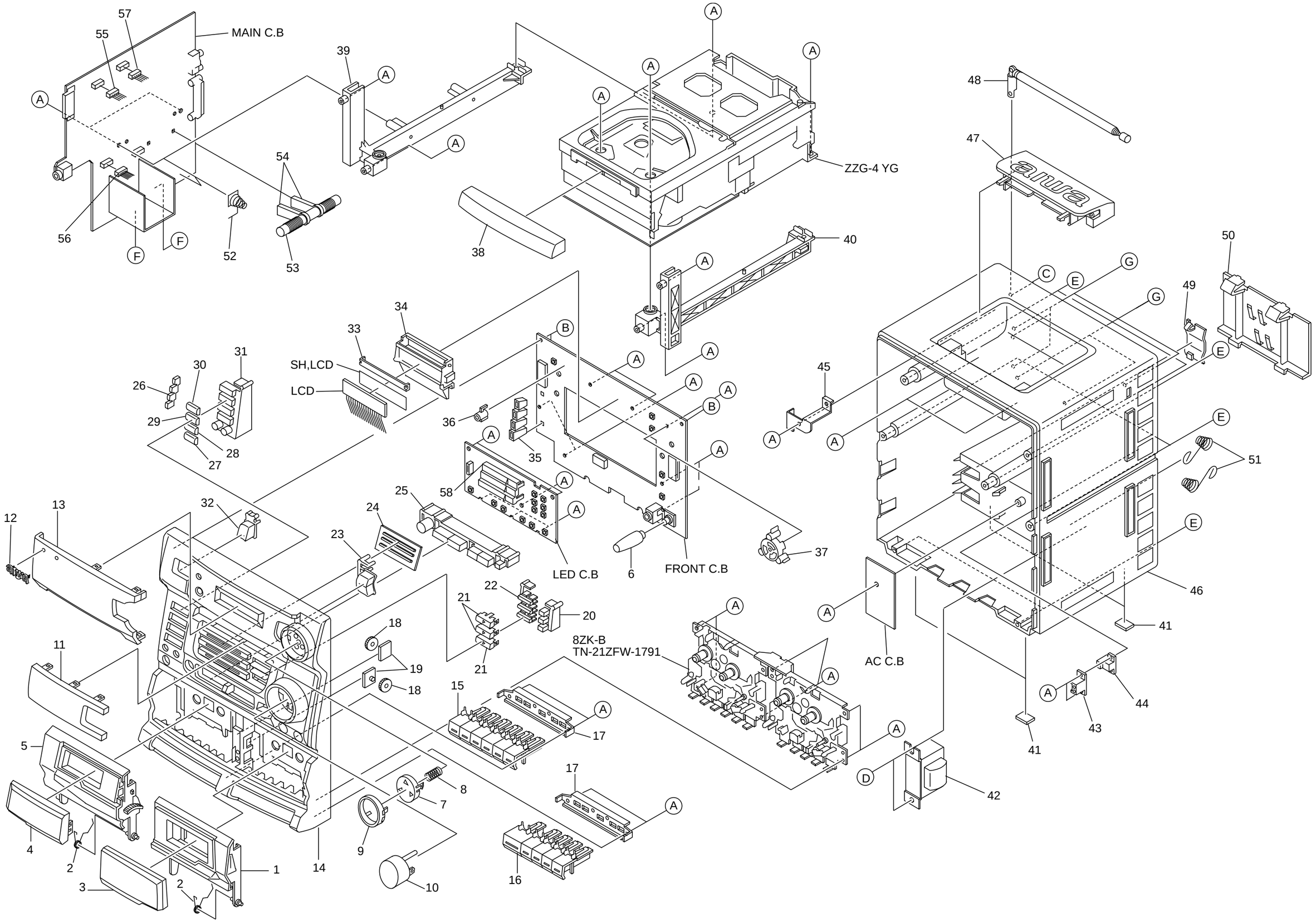
4. FM Tracking Adjustment
   L005 ..... 87.5 MHz

<DECK SECTION>

5. Tape Speed Adjustment
   Settings: • Test Tape: TTA-100 (TTA-111S)
   • Test point: J602 (PHONES Jack)
   • Adjustment location: SFR751
   Method: Playback the test tape with DECK 1 and adjust SFR 751 so that the output frequency is 3000 Hz.
   After the adjustment, check that the frequency of DECK 2 is 3000 45 Hz.

6. Head Azimuth Adjustment
   Settings: • Test Tape: TTA-320 (TTA-113B, TTC-152)
   • Test point: J201 (PHONES Jack)
   • Adjustment location: Head Azimuth Adjustment Screw
   Method: Playback the 10 kHz signal of test tape and adjust screw so that the output becomes maximum.

MECHANICAL EXPLODED VIEW 1/1



MECHANICAL MAIN PARTS LIST 1/1

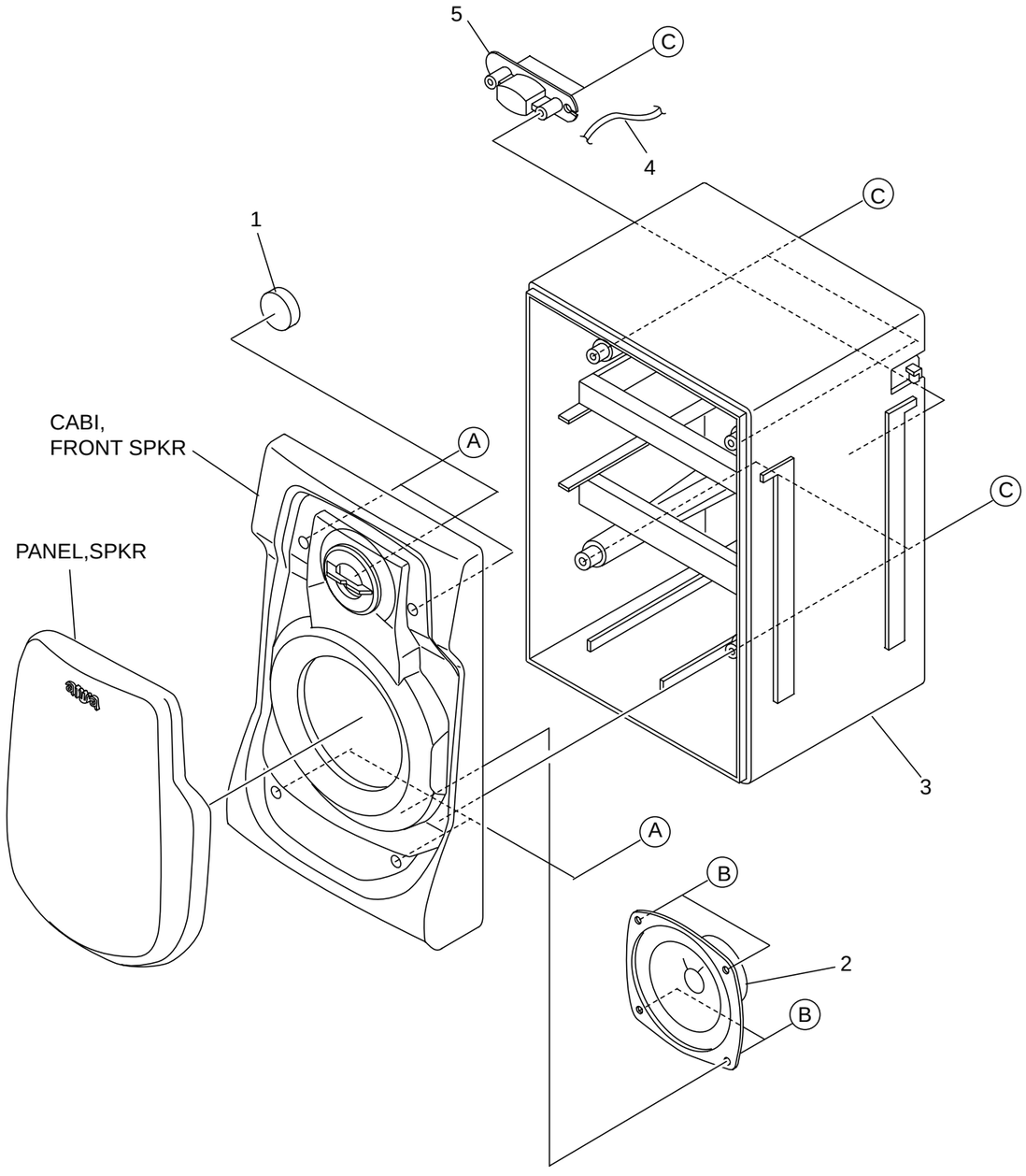
DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-CT1-004-010		BOX,CASS B
2	8Z-CT4-211-010		SPR-T,CASS
3	8Z-CT1-019-010		WINDOW,CASS B
4	8Z-CT1-018-010		WINDOW,CASS A
5	8Z-CT1-003-010		BOX,CASS A
6	8Z-CT1-015-010		KNOB,RTRY MIC
7	8Z-CT1-012-010		KEY,EQ
8	8Z-CT1-210-010		SPR-C,EQ
9	8Z-CT1-020-010		LENS,EQ
10	8Z-CT1-013-010		KEY,VOL
11	8Z-CT1-017-010		WINDOW,CD
12	81-CD1-032-010		BADGE,AIWA 30J
13	8Z-CT1-016-010		WINDOW,DISP
14	8Z-CT1-001-010		CABI,FRONT
15	8Z-CT1-005-010		KEY,CASS A
16	8Z-CT1-006-010		KEY,CASS B
17	8Z-CT4-212-010		HLDR,KEY CASS
18	88-CT4-225-010		GEAR,OIL DUMP
19	88-CT4-226-010		HLDR,OIL DUMP
20	8Z-CT1-007-010		KEY,CD OPEN
21	8Z-CT1-034-010		KEY,CD CAP
22	8Z-CT1-008-010		KEY,CD PLAY
23	8Z-CT1-011-010		KEY,Q SURROUND
24	8Z-CT1-021-010		LENS,CD MAIN
25	8Z-CT1-014-010		KEY,MAIN
26	8Z-CT1-022-010		LENS,FUNC
27	8Z-CT1-029-010		LENS,TAPE
28	8Z-CT1-028-010		LENS,TUNER
29	8Z-CT1-027-010		LENS,AUX
30	8Z-CT1-026-010		LENS,CD
31	8Z-CT1-009-010		KEY,FUNC
32	8Z-CT1-010-010		KEY,POWER
33	8Z-CT1-208-010		COVER, LED
34	8Z-CT1-203-010		HLDR,LCD
35	8Z-CT1-207-010		HLDR,LED FUNC
36	8Z-CT1-204-010		HLDR,LED OPE
37	8Z-CT1-209-010		HLDR,EQ
38	8Z-CT1-023-010		PANEL,CD
39	8Z-CT1-201-010		CHAS,CD A
40	8Z-CT1-202-010		CHAS,CD B
41	88-CT4-026-010		CUSH,FOOT
⚠ 42	8Z-CT1-612-010		PT,U
43	87-A90-086-010		COVER,AC-SOCKET
⚠ 44	87-A60-177-010		JACK,AC U W/SW
45	88-CT4-224-010		HLDR,ANT
46	8Z-CT1-002-010		CABI,REAR
47	8Z-CT4-041-010		PANEL,TOP ST
48	86-CT4-616-010		ANT,ROD
49	87-CT4-037-110		COVER, BATT
50	8Z-CT4-040-010		LID,BATT
51	88-CT4-207-010		SPR-C,BATT A
52	88-CT4-208-010		SPR-C,BATT B
53	8Z-CT4-616-010		BAR-ANT,MW2B
54	8Z-CT4-624-010		HLDR,BAR-ANT
55	88-CT4-607-010		CONN ASSY,5P
56	88-CT4-608-110		CONN ASSY,9P
57	88-CT4-606-010		CONN ASSY,4P
58	8Z-CT1-206-010		HLDR,LED CD
A	87-751-096-410		VT2+3-10 GLD
B	87-753-095-410		VT2+3-8W/O SLOT BLK
C	87-493-100-410		VWWS+3-16 BLK
D	87-661-100-410		VFT1+3-16
E	87-753-104-410		VT2+3-30 W/0 BLK
F	87-067-579-010		TAPPING SCREW, BVT2+3-8
G	87-753-097-410		VT2+3-12 W/O BLK

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		

SPEAKER EXPLODED VIEW 1/1

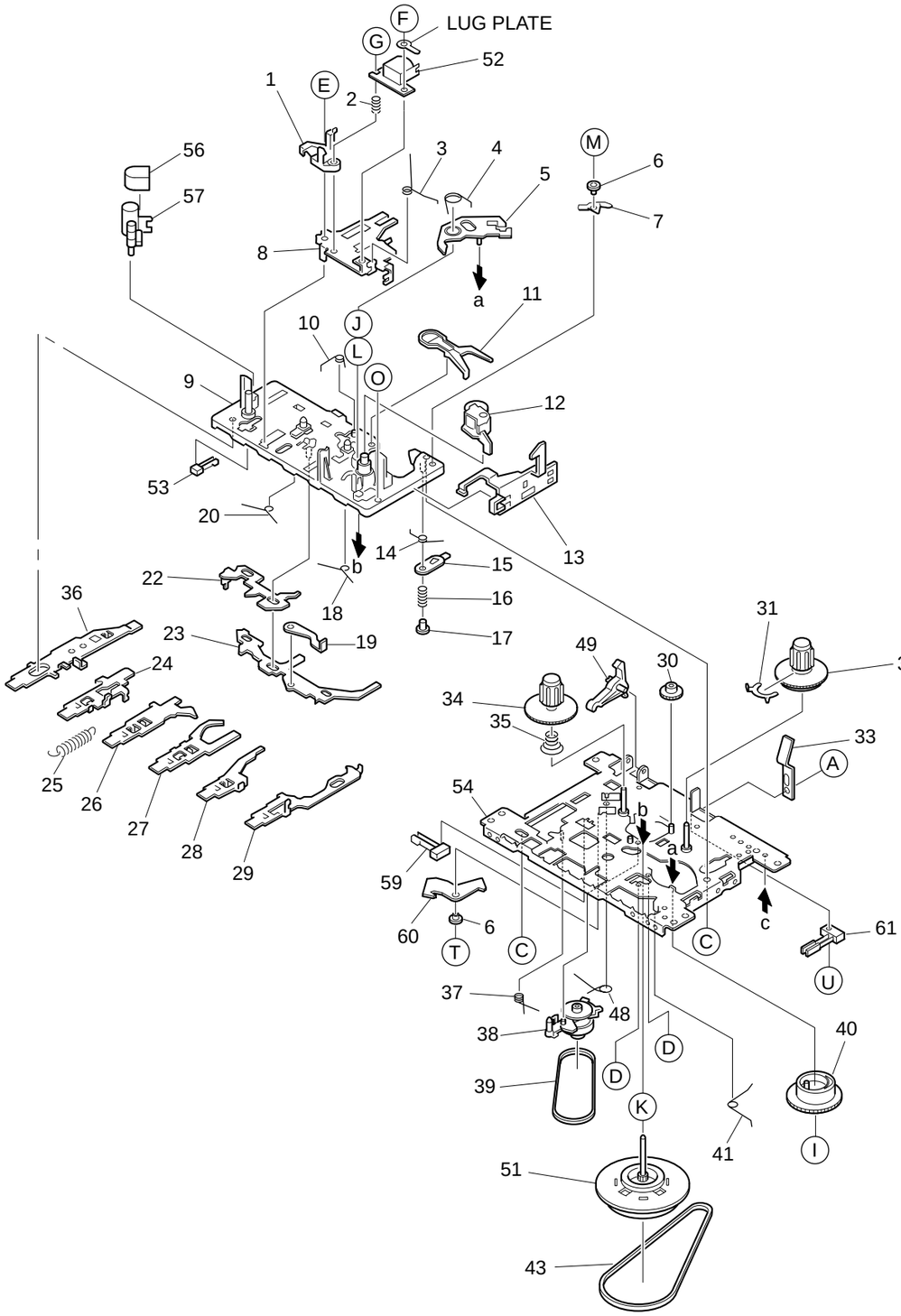


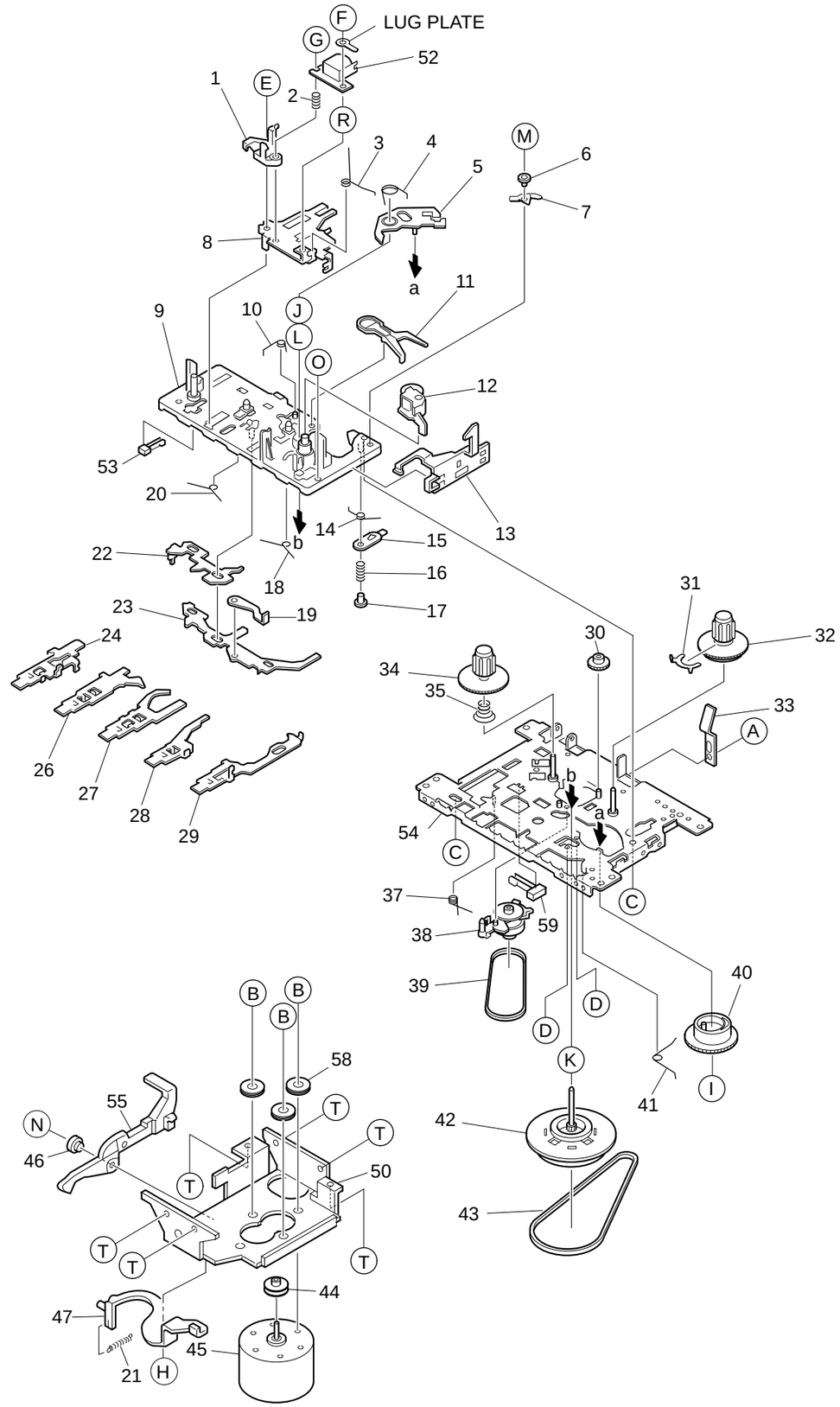
SPEAKER PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	86-CT4-626-010		SPKR,T
2	86-CT4-625-010		SPKR,W 120 40HM 10W 6CT-4
3	87-CT4-027-110		CABI,REAR SPKR L
3	87-CT4-028-110		CABI,REAR SPKR R
4	86-CT4-627-010		CORD,2PSPKR
5	84-CT4-106-110		HLDR,CORD
A	87-751-096-410		VT2+3-10 GLD
B	87-661-097-410		TAPPING SCREW, VFT1+3-12
C	87-751-098-410		SCREW 3X14

TAPE MECHANISM EXPLODED VIEW 1/1





TAPE MECHANISM PARTS LIST 1/1

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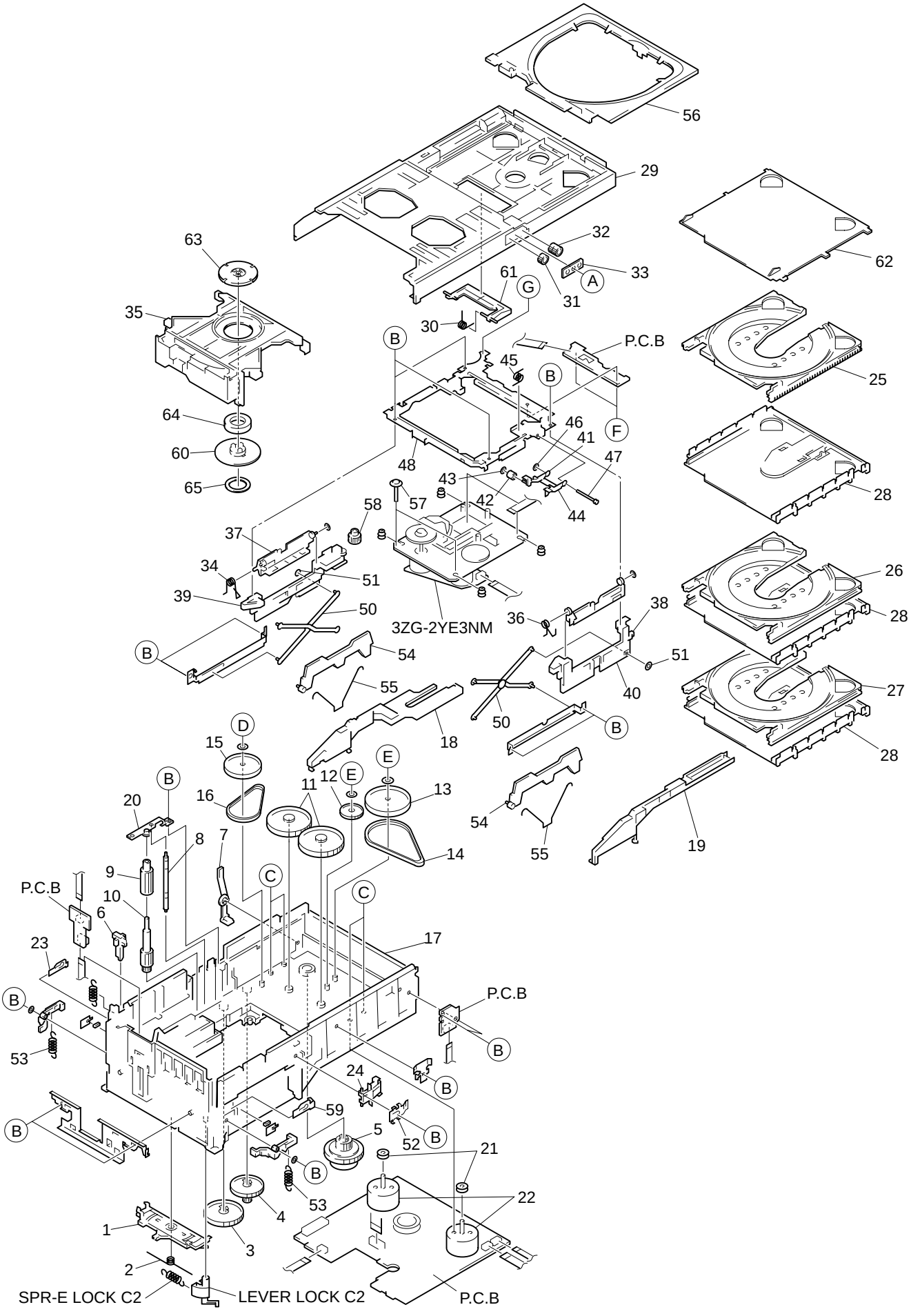
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	S1-921-030-4A0		HEAD BASE
2	S1-821-030-070		AZIMUTH SPRING
3	S1-921-030-090		PANEL P SPRING
4	S1-921-260-050		GEAR PLATE SPRING
5	S1-921-265-020		GEAR PLATE ASSY
6	S1-921-140-370		P ARM COLLER
7	S1-921-140-340		P ARM
8	S1-921-030-110		HEAD PANEL
9	S1-921-143-160		BASE ASSY
10	S1-921-141-8A0		M CONTROL SPRING
11	S1-921-260-4A0		SENSING LEVER
12	S1-921-043-100		PINCH ROLLER ARM ASSY
13	S1-921-130-020		EJECT SLIDE LEVER
14	S1-921-141-3A0		P CONTROL SPRING
15	S1-921-140-820		PAUSE LEVER(F)
16	S1-921-140-120		PAUSE LEVER SPRING
17	S1-921-140-110		PAUSE STOPPER
18	S1-921-140-150		BUTTON LEVER SPRING(B)
19	S1-821-011-590		E KICK LEVER
20	S1-921-140-140		BUTTON LEVER SPRING(A)
21	S1-821-120-250		P KICK LEVER SPRING
22	S1-921-140-090		SWITCH ACTUATOR
23	S1-921-140-080		PUSH BUTTON ACTUATOR
24	S1-921-140-230		PLAY BUTTON LEVER
25	S1-821-010-500		PLAY BUTTON LEVER SPRING
26	S1-921-140-240		REW BUTTON LEVER
27	S1-921-140-250		FF BUTTON LEVER
28	S1-921-140-260		STOP BUTTON LEVER
29	S1-921-140-610		PAUSE BUTTON LEVER
30	S1-821-100-700		FF GEAR
31	S1-921-050-060		SENSOR
32	S1-921-053-100		TAKE UP REEL ASSY
33	S1-829-100-010		PACK SPRING
34	S1-921-050-150		S REEL HUB
35	S1-921-050-220		BACK TENSION SPRING
36	S1-921-140-220		REC BUTTON LEVER
37	S1-921-140-170		P.S.LEVER SPRING
38	S1-921-073-080		RF CLUTCH ASSY
39	S1-921-070-030		RF BELT
40	S1-921-260-020		CAM GEAR
41	S1-921-140-160		E ACTUATOR SPRING
42	S1-921-093-040		FLYWHEEL ASSY
43	S1-921-090-240		MAIN BELT
44	S1-921-120-130		MOTOR PULLEY
45	S6-002-030-290		MOTOR EG530YD-2BH
46	S1-821-120-650		COLLER B
47	S1-821-120-680		P KICK LEVER (A)
48	S1-921-140-210		REC BUTTON LEVER SPRING
49	S1-821-100-690		RECORD SAFETY LEVER
50	S1-921-120-110		MOTOR BRACKET
51	S1-921-093-030		FLYWHEEL ASSY
52	S6-202-010-920		R.P HEAD MS15R-AK0N1
53	S6-401-011-520		LEAF SW MSW-1541F
54	S1-921-015-010		CHASSIS ASSY
55	S1-921-120-090		P KICK LEVER B
56	S6-209-100-100		E HEAD PH-K380-MS1
57	S1-921-030-050		MG ARM
58	S1-820-130-060		MOTOR RUBBER
59	S6-401-011-610		LEAF SW MSW-17820MVEI
60	S1-921-020-010		REC ARM
61	S6-401-010-380		LEAF SWITCH MSW-1275
A	S9-P33-200-320		DEL TITE SCREWM2-3
B	S1-821-120-020		MOTOR COLLER SCREW
C	S9-B10-200-510		P TAPPING BIND SCREW M2-5
D	S9-C07-204-510		SCREW,TAPPING(CAMERA)M2-4.5
E	87-261-553-310		SCREW,M2-6
F	87-261-032-410		SCREW,M2-3
G	S9-F08-200-710		AZIMUTH SCREW M2-7
H	S1-821-120-230		PK COLLER SCREW A
I	S9-W02-300-100		P WASHER CUT 1.2-3.8-0.3
J	S9-W02-500-100		P WASHER CUT 1.45-3.8-0.5
K	S9-W01-400-100		P WASHER 2-3.5-0.4
L	S9-W01-130-200		P WASHER 2.1-4-0.13
M	S9-P08-203-010		PS TAPPING SCREW M2-3
N	S9-P04-200-610		C TAPPING SCREW M2-6
O	S9-P05-200-810		SCREW,S TAP 2-8
R	S9-W13-000-100		Y WASHER PB 0.1T
T	S9-P04-200-410		C TAPPING SCREW M2-4
U	S9-P04-200-510		C TAPPING SCREW M2-5

CD MECHANISM EXPLODED VIEW 1/3

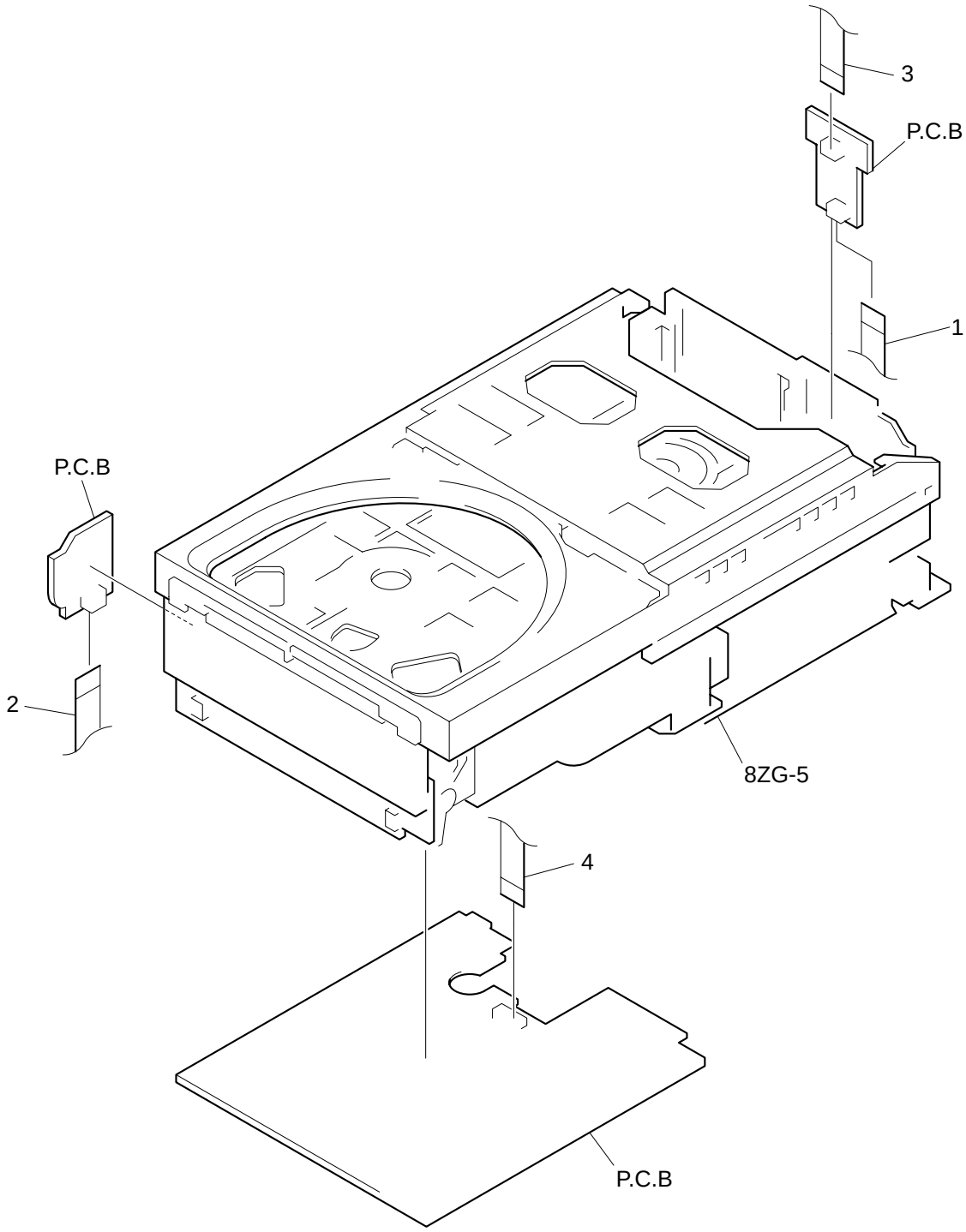


CD MECHANISM PARTS LIST 1/3

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	88-ZG5-241-010		LEVER,LOCK C
2	88-ZG5-242-010		SPR-T,LOCK C
3	88-ZG5-206-010		GEAR,BASE A
4	88-ZG5-207-010		GEAR,BASE B
5	88-ZG5-211-010		GEAR,SLIDER B
6	88-ZG5-224-010		LEVER,LOCK F
7	88-ZG5-250-010		LEVER,SW F
8	88-ZG5-247-010		SHAFT,ELEVATOR
9	88-ZG5-254-010		GEAR,TRAY A
10	88-ZG5-255-010		GEAR,TRAY B
11	88-ZG5-210-010		GEAR,SLIDER A
12	88-ZG5-212-010		GEAR,SLIDER C
13	88-ZG5-213-010		PULLEY,SLIDER
14	88-ZG5-281-010		BELT,SLIDER
15	88-ZG5-209-010		PULLEY,BASE
16	88-ZG5-282-010		BELT,BASE
17	88-ZG5-202-010		BASE,
18	88-ZG5-237-010		LEVER,SLIDE R
19	88-ZG5-236-010		LEVER,SLIDE L
20	88-ZG5-246-010		HLDR,SHAFT
21	82-ZM1-247-210		PULLEY,MOTOR
22	87-045-305-010		MOTOR, RF-500TB DC-5V (2MA)
23	88-ZG5-258-010		SPR-P,CATCHER L
24	88-ZG5-263-010		LEVER,TRAY
25	88-ZG5-243-010		TRAY,1
26	88-ZG5-244-010		TRAY,2
27	88-ZG5-245-010		TRAY,3
28	88-ZG5-204-010		MAGAZINE,
29	88-ZG5-221-010		FRAME,MAIN
30	88-ZG5-265-010		SPR-T,LVR LIFT
31	88-ZG5-218-010		GEAR,FRAME A
32	88-ZG5-219-010		GEAR,FRAME B
33	88-ZG5-223-010		FRAME,SIDE
34	88-ZG5-257-010		SPR-T,CATCHER R
35	88-ZG5-226-010		HLDR,CLAMP
36	88-ZG5-251-010		SPR-T,CATCHER L
37	88-ZG5-228-010		LEVER,CATCHER R
38	88-ZG5-227-010		LEVER,CATCHER L
39	88-ZG5-253-010		HLDR,ELEVATOR R
40	88-ZG5-252-010		HLDR,ELEVATOR L
41	88-ZG5-279-010		LEVER ASSY,ROLLER L
42	88-ZG5-287-010		ROLLER ASSY,
43	87-B10-220-010		W-P,0.94-5-0.25 SLIT
44	88-ZG5-280-010		LEVER ASSY,ROLLER R
45	88-ZG5-270-010		SPR-T,LVR ROLLER
46	87-B10-221-010		W-P,0.85-3-0.25 SLIT
47	88-ZG5-262-010		SHAFT,ROLLER 2
48	88-ZG5-238-010		PLATE,ELEVATOR
49	88-ZG5-231-010		LEVER ASSY,LINK R
50	88-ZG5-229-010		LEVER ASSY,LINK L
51	87-B10-219-010		W-P,2.15-3.5-0.25 SLIT
52	88-ZG5-266-010		SPR-T,LVR TRAY
53	88-ZG5-225-010		SPR-E,LOCK F
54	88-ZG5-239-010		PLATE,LIFT
55	88-ZG5-240-010		SPR-T,LIFT
56	88-ZG5-222-010		FRAME,TOP
57	81-ZG1-254-010		S-SCREW,MECH HLDR
58	88-ZG5-217-010		GEAR,ELEVATOR
59	88-ZG5-259-010		SPR-P,CATCHER R
60	84-ZG1-243-110		HLDR,MAGNET N(J)
61	88-ZG5-264-010		LEVER,LIFT
62	88-ZG5-203-010		MAGAZINE,TOP
63	83-ZG3-211-010		PLATE,DISC
64	83-ZG3-602-010		RING,MAG
65	86-ZG1-239-110		PLATE,DISC PC
A	88-ZG5-300-010		VFT2+2-12 W/O
B	88-ZG5-302-010		S-SCREW,8ZG5+2-4 W/O
C	87-251-071-110		SCREW, U+2.6-4
D	88-ZG5-301-010		VFT2+2-20 W/O
E	88-ZG5-300-010		VFT2+2-16
F	87-B10-271-010		VIT+1.7-3
G	88-ZG5-317-010		S-SCREW,8ZG5S +2-4 W/O

CD MECHANISM EXPLODED VIEW 2/3



CD MECHANISM PARTS LIST 2/3

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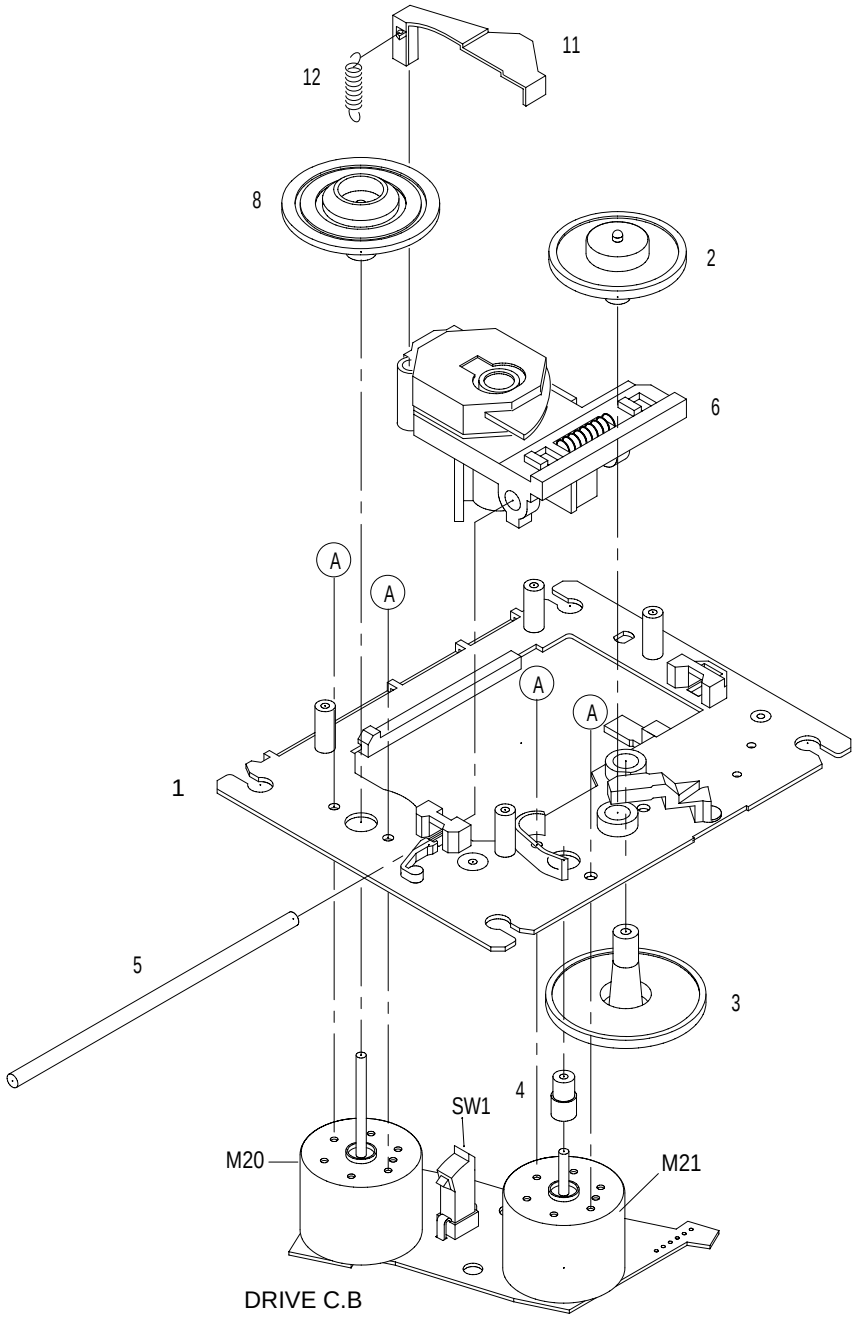
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	88-906-191-110		FF-CABLE,6P 1.25
2	84-ZG2-612-110		CABLE,FFC 4P L=130
3	8Z-ZG4-613-010		FF-CABLE, 4P 1.0 210MM
4	8Z-ZG4-610-010		FF-CABLE, 16P 1.0 70MM PIC

CD MECHANISM EXPLODED VIEW 3/3



CD MECHANISM PARTS LIST 3/3

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REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	83-ZG2-243-110		CHAS ASSY,SHT
2	83-ZG2-235-010		GEAR,A3
3	83-ZG2-205-210		GEAR,B
4	83-ZG2-236-010		GEAR MOTOR 3
5	83-ZG2-240-010		SHAFT,SLIDE 3
6	87-A90-836-010		PICKUP,KSS-213F
8	83-ZG2-233-010		TURN TABLE,A5
11	83-ZG2-245-110		LEVER,SHUTTER
12	83-ZG2-250-010		SPR-E,SHT 2
A	87-261-032-210		SCREW V+2-3

サービス技術ニュース	
番号	連絡内容
G一　一	
G一　一	
G一　一	

アイワ株式会社 〒110-8710 東京都台東区池之端1-2-11 ☎03(3827)3111 （代表）
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